

## Faculty of Medicine Siriraj Hospital

**No. 198**

- Authors** : Aanpreung P, Vajaradul C.  
**Title** : Cyclic vomiting syndrome in Thai children.  
**Source** : Journal of the Medical Association of Thailand. 85:S743-8 (Suppl 2), 2002(Aug).  
**Keywords** : Children, Cyclic Vomiting Syndrome.  
**Abstract** : Cyclic vomiting syndrome (CVS) is a severe childhood vomiting disorder of unknown etiology and pathogenesis. Clinical manifestations and prophylactic therapy of vomiting have been described in the literature. The data were limited in Asian children. The aim of this study was to study the clinical manifestation, to evaluate using antimigraine prophylactic drugs and response in Thai children with CVS. The medical records of children with a diagnosis of CVS in the Department of Pediatrics, Siriraj Hospital, Mahidol University from 1994 to 2001 were retrospectively reviewed. Demographic data, clinical manifestations, investigations, treatment and outcome were collected and analyzed. Twenty five patients were enrolled in this study including 13 females and 12 males. Their ages ranged from 2.3 years to 14 years (7.8 +/- 3.4 years). The age of onset was 5.2 +/- 3.2 years. They had 14.7 +/- 6.5 episodes per year with a duration of each attack 4 +/- 1.8 days. There were 8 mild, 10 moderate and 7 severe cases. There were only 6 patients (24%) who had headache and 50 per cent of these had a family history of migraine. Eight patients received pizotifen which had 3 good, 1 fair, and 4 poor responses. Of this group, in 3 patients pizotifen was changed to amitriptyline. Eighteen patients received amitriptyline and the result of treatments were 11 good, 4 fair, and 3 poor. The other 2 patients were on propranolol with one good and one poor responses. The efficacy of amitriptyline and pizotifen were compared (83.3% vs 50%) which revealed no statistical significance ( $p = 0.14$ ). There was no side effect from any of the medication in this study. In conclusion, the present report showed similar data of clinical features, prophylactic treatment and outcome as previous reports, except for fewer migraine headaches in patients and their families. Amitriptyline and pizotifen were effective in prophylactic therapy of vomiting episodes.

**No. 199**

- Authors** : Akarasereenont P, Chotewuttakorn S, Techatraisak K, Thaworn A.  
**Title** : The effects of COX-metabolites on cyclooxygenase-2 induction in LPS-treated endothelial cells.  
**Source** : Journal of the Medical Association of Thailand. 84:S696-709 (Suppl 3), 2001(Dec).  
**Keywords** : COX-metabolites, Human umbilical vein endothelial cells, Endothelial cells  
**Abstract** : Cyclooxygenase (COX) is the first enzyme in the pathway in which arachidonic acid is converted to PGs, also called COX-metabolites. COX exists as COX-1 and COX-2 isoforms. Each COX-metabolite has different characters and functions. The amounts of each COX-metabolite produced in cells are also different depending on cell type and mitogen stimulated cells. These were thought to be autoregulation among COX-metabolites. Here, we have investigated the effects of COX-metabolites, such as PGI<sub>2</sub>, PGE<sub>2</sub>, PGF<sub>2</sub>α and U44069, on the induction of COX-2 in human umbilical vein endothelial cells (HUVEC) treated with LPS (1 microg/ml). COX activity was measured by the production of 6-keto-PGF<sub>1</sub>α, PGE<sub>2</sub>, PGF<sub>2</sub>α and TXB<sub>2</sub> in the presence of exogenous arachidonic acids (10 microM for 10 min) using enzyme immunoassay (EIA). COX-1 and COX-2 protein was measured by immunoblotting using specific

antibody. PGI<sub>2</sub>, PGE<sub>2</sub>, PGF<sub>2</sub>α or U44069, did not affect on basal COX activity in untreated HUVEC (24 h incubation). Untreated HUVEC contained COX-1 protein but not COX-2 protein. When HUVEC were treated with LPS (1 microg/ml for 24 h), COX activity and COX-2 protein was increased in a dose dependent manner. The increased COX activity in LPS (1 microg/ml) treated HUVEC was inhibited with PGE<sub>2</sub> (0.03, 0.3 or 3 microM), but not PGI<sub>2</sub>, PGF<sub>2</sub>α or U44069, in a dose dependent manner. Similarly, COX-2 protein expression in LPS treated HUVEC was also inhibited with PGE<sub>2</sub>, but not PG<sub>2</sub>, PGF<sub>2</sub>α or U44069, in a dose dependent manner. These results suggested that PGE<sub>2</sub>, but not PGI<sub>2</sub>, PGF<sub>2</sub>α or TXA<sub>2</sub> is a key in feedback regulation of COX-metabolites produced in HUVEC.

**No. 200**

- Authors** : Akarasereenont PC, Techatraisak K, Thaworn A, Chotewuttakorn S.  
**Title** : The expression of COX-2 in VEGF-treated endothelial cells is mediated through protein tyrosine kinase.  
**Source** : Mediators of Inflammation. 11(1):17-22, 2002(Feb).  
**Keywords** : Treated Endothelial Cells, Cyclooxygenase.  
**Abstract** : Cyclooxygenase (COX), existing as the COX-1 and COX-2 isoforms, converts arachidonic acid to prostaglandin H<sub>2</sub>, which is then further metabolized to various prostaglandins. Vascular endothelial growth factor (VEGF) has been shown to play important roles in inflammation and is upregulated by the prostaglandin E series through COX-2 in several cell types. Here, we have investigated the effects of VEGF on the COX isoform expressed in human umbilical vein endothelial cells (HUVEC). The signalling mechanism of the COX isoform expressed in endothelial cells activated with VEGF will be also investigated using the tyrosine kinase inhibitor, genistein, and protein kinase C inhibitor, staurosporine. The activity of COX-2 was assessed by measuring the production of 6-keto-prostaglandin F<sub>1</sub>α in the presence of exogenous arachidonic acids (10 microM, 10 min) by enzyme immunoassay. The expression of COX isoform protein was detected by immunoblot using specific antibodies. Untreated HUVEC contained no COX-2 protein. In HUVEC treated with VEGF (0.01-50 ng/ml), COX-2 protein, but not COX-1, and COX activity were increased in a dose-dependent manner. Interestingly, the increased COX-2 protein and activity in response to VEGF (10 ng/ml) was inhibited by the tyrosine kinase inhibitor, genistein (0.05-5 microg/ml), but not by the protein kinase C inhibitor, staurosporine (0.1-10 ng/ml). Thus, the induction of COX-2 by VEGF in endothelial cells was mediated through protein tyrosine kinase, and the uses of specific COX-2 inhibitors in these conditions, in which VEGF was involved, might have a role.

**No. 201**

- Authors** : Amorniyotin S, Sanansilp V, Amorntien V, Tirawat P.  
**Title** : Effectiveness of lightwand (Trachlight) intubation by 1st year anesthesia residents.  
**Source** : Journal of the Medical Association of Thailand. 85:S963-8 (Suppl.3), 2002(Sep).  
**Keywords** : Lightwand, Anesthesia Residents.  
**Abstract** : Transillumination of the soft tissue of the neck using a lighted stylet (lightwand) is an effective and safe intubating technique in experienced hands. The goal of this study was to determine the effectiveness and safety of this device in intubating the trachea of elective surgical patients by non-experienced hands. One hundred and fifty, paralysed, anesthetized, adult patients (ASA I-II, no

known or potential problems with intubation) were studied. Failure to intubate was defined as lack of successful intubation after three attempts. The duration of each attempt was recorded as the time from insertion of the device into the oropharynx to the time of its removal. The total time to intubation (TTI) was defined as the sum of the durations of all (as many as three) intubation attempts. Complications, such as mucosal bleeding, lacerations, dental injury and sore throat were recorded. The mean TTI was 42.0 +/- 34.3 seconds. The overall intubation success rate was 92 per cent. Of all the successful intubations, 87.68 per cent were successful after one attempt. There were significantly fewer traumatic events (5.33%). Most of the trauma consisted of minor mucosal bleeding or mucosal laceration. We conclude that lightwand intubation is an effective and safe technique in non-experienced hands.

**No. 202**

- Authors** : Amornyotin S, Santawat U, Rachatamukayanant P, Nilsuwankosit P, Pipatnaraphong H.
- Title** : Can lidocaine reduce succinylcholine induced postoperative myalgia?
- Source** : Journal of the Medical Association of Thailand. 85:S969-74 (Suppl.3), 2002(Sep).
- Keywords** : Lidocaine, Succinylcholine, Postoperative Myalgia.
- Abstract** : This study was undertaken to determine the effect of lidocaine pretreatment on reduction of succinylcholine-induced myalgia in patients undergoing general anesthesia for gynecological surgery. One hundred and thirty-five patients were assigned to one of three groups in a prospective, double blind, randomized manner. Group PS, the control group, received normal saline and succinylcholine 1.5 mg x kg(-1); Group LS, lidocaine 1.5 mg x kg(-1) and succinylcholine 1.5 mg x kg(-1); Group PR, normal saline and rocuronium 0.6 mg x kg(-1). Morphine 0.1 mg x kg(-1) iv was given for premedication and all patients were monitored with a noninvasive blood pressure monitor, ECG and pulse oximetry. Anesthesia was induced with 5 mg.kg(-1) thiopental iv. followed by succinylcholine (Group PS, LS) or rocuronium (Group PR) for tracheal intubation. Following administration of these agents, the presence, and degree of fasciculation were assessed visually on a four point scale by one investigator who was blinded to the drug administered. The blood pressure and heart rate of each patient were monitored on nine occasions. Twenty-four hours later, any myalgia experienced was assessed according to a structured questionnaire and graded by a four point scale by one investigator blinded to the intraoperative management. The results indicate that muscle fasciculation was not found in Group PR while the patients in Group LS had a lower incidence of muscle fasciculation than those in Group PS ( $p < 0.001$ ). At 24 h, the incidence of myalgia was higher in Group PS than in Group LS and PR ( $p < 0.05$ ). A correlation was not found between the incidence of myalgia and the occurrence of muscle fasciculation. The changes in systolic and diastolic blood pressure and heart rate were not significant among the three groups. In conclusion, where succinylcholine is used, lidocaine is proven to be the useful pretreatment agent for the reduction of postoperative myalgia.

**No. 203**

- Authors** : Angsuwarangsee T, Morrison M.  
**Title** : Extrinsic laryngeal muscular tension in patients with voice disorders.  
**Source** : Journal of Voice. 16 (3): 333-343, 2002.  
**Keywords** : Muscular tension dysphonia, Laryngeal palpation, Voice disorder diagnosis  
**Abstract** : The objective of this study was to establish a standard clinical evaluation tool for assessment by palpation of extrinsic laryngeal muscular tension (ELMT) and investigate the relationship between ELMT and different voice disorder diagnosis categories, particularly muscle misuse dysphonia (MMD), and the presence or absence of gastroesophageal reflux (GER). A palpation technique and tension grading system for four separate muscle groups (suprahyoid, thyrohyoid, cricothyroid, and pharyngolaryngeal) were established. 465 patients, 65% female and 35% male, were assessed sequentially and ELMT results were analyzed in relation to diagnosis and reflux status. A strong relationship was found between thyrohyoid muscle tension and both GER and MMD (p greater than or equal to 0.01). Thyrohyoid muscle tension is the only group that demonstrated a significant relationship with MMD. No significant difference in the ELMT scores was found between GER and non-GER patients, although a possible causal relationship was found between MMD type 3 and reflux. It is postulated that palpation of extrinsic laryngeal muscles can yield important information about internal laryngeal postures and diagnosis of muscle misuse voice disorders, particularly MMD type 3 (anteroposterior supraglottic compression). Integration of this technique into routine laryngeal examination can be a significant aid to diagnostic accuracy.

**No. 204**

- Authors** : Angus AC, Chua S, Wun ST, Moh M, Mahakittikun V, Bunnag C, Vichyanond P, Wang DY, Lee BW, Lim S, Chew FT.  
**Title** : Patterns of allergic sensitisation and cross-reactivity between *Blomia tropicalis* and *Dermatophagoides farinae*: A comparative study.  
**Source** : Journal of Allergy and Clinical Immunology.109(1):624 (Suppl.S), 2002(Jan).  
**Keywords** : *Blomia Tropicalis*, *Dermatophagoides Farinae*.

**No. 205**

- Authors** : Ariyoshi K, Promadej N, Ruxrungtham K, Sutthent R.  
**Title** : Toward improved evaluation of cytotoxic T-lymphocyte (CTL)-inducing HIV vaccines in Thailand.  
**Source** : Aids Research and Human Retroviruses. 18(10): 737-739, 2002(Jul 1).  
**Keywords** : Epitopes, Virus, Cells, Cytotoxic T-lymphocyte, HIV.

**No. 206**

- Authors** : Arkachaisri T.  
**Title** : Serum sickness and hepatitis B vaccine including review of the literature.  
**Source** : Journal of the Medical Association of Thailand. 85(Suppl 2):S607-12, 2002 (Aug).  
**Keywords** : Hepatitis B.  
**Abstract** : HB vaccine is one of the most widely administered vaccines in the world. Its efficacy approaches 95 per cent. The majority of adverse reactions are generally mild, although there have been individual case reports of serious reactions since the vaccine has become commercially available. Here, a patient with a serum sickness-like reaction after her second HB immunization is reported. Review of the literature for reports of serious adverse reactions to the vaccine was also carried out.

**No. 207**

- Authors** : Aroonpruksakul N, Raksakiatisak M, Thapenthai Y, Wangtawesauw K, Chaiwat O, Vacharaksa K, Lertakyamanee J.
- Title** : Perioperative cardiac arrest at Siriraj Hospital between 1999-2001.
- Source** : Journal of the Medical Association of Thailand. 85:S993-9 (Suppl.3), 2002(Sep).
- Keywords** : Perioperative cardiac.
- Abstract** : Cardiac arrest during the perioperative period is a good indicator of the quality of anesthetic management. The incidence of perioperative cardiac arrest in Siriraj Hospital hasn't been reported before. Our objectives were to determine the incidence of perioperative anesthesia-related cardiac arrest and the results of cardiopulmonary resuscitation in these cases in order to find out how to improve our anesthetic care. This prospective study was undertaken between 1999-2001 by sending a questionnaire to those witnessing a cardiac arrest. The incidence of perioperative cardiac arrest was 8.2:10,000 instances of anesthesia with a mortality of 5.6:10,000 within 48 hours of the arrest. The incidence of perioperative cardiac arrest that was related to anesthesia was 0.7:10,000 instances of anesthesia and the anesthesia related mortality was 0.19: 10,000 within 48 hours of arrest. Failed cardiopulmonary resuscitation occurred in of occasions 41.7 per cent. There was no difference between intraoperative and postoperative cardiopulmonary resuscitation. Twenty-one per cent of patients experiencing a cardiac arrest were discharged from hospital. Seventy-three per cent of events occurred in patients with an ASA rating 3-5 and most often the cause of arrest was massive or uncontrolled bleeding. In those patients with an ASA rating 1-2 there were no outstanding cause of arrest.

**No. 208**

- Authors** : Assantachai P, Chatthanawaree W, Thamlikitkul V, Praditsuwan R, Pisalsarakij D.
- Title** : Strategy to prevent falls in the Thai elderly: a controlled study integrated health research program for the Thai elderly.
- Source** : Journal of the Medical Association of Thailand. 85(2):215-22, 2002(Feb).
- Keywords** : Elderly.
- Abstract** : Instability or falls are one of the important warning symptoms of underlying serious illness among the elderly, so many studies have concentrated on the risk factors for falls. However, a study involving a strategic method to reduce the incidence of falls is the next step and is the main objective of this study. 1,043 elderly subjects living in the urban area around Siriraj Hospital Medical School, Bangkok, were recruited, 585 of them were allocated to the study group and 458 subjects to the control group. A leaflet containing information on important risk factors of falls within their community was enclosed with a follow-up postcard in the study group only. In addition, this particular group was allowed free access to the geriatric clinic at Siriraj Hospital if there was any health problem. All of them received a postcard asking about any falls which had occurred over the previous 2 months on 6 occasions and a telephone call if the postcards were not returned to the team. The percentage of elderly who kept in contact was 92.5 per cent, 90.6 per cent, 89.3 per cent, 89.2 per cent, 86.2 per cent and 85.45 per cent for the first to final follow-up respectively. After one year of longitudinal study, the overall incidence of falls was 6.6 per cent in the study group and 10.1 per cent in the control group. The incidence of falls began to show a statistically significant difference between the two groups at the fourth and sixth episodes of follow-up (P = 0.002 and 0.004). The Kaplan-Meier survival analysis also revealed a statistically significant difference in the incidence of falls between the two groups (P =0.01). In conclusion,

the incidence of falls was significantly reduced in the study group and a repeated campaign to alert the elderly to the risk of falling is a cost-effective way of fall prevention among the healthy elderly in the community.

**No. 209**

- Authors** : Assantachai P, Panchavinnin P, Pisalsarakij D.  
**Title** : An electrocardiographic survey of elderly Thai people in the rural community.  
**Source** : Journal of the Medical Association of Thailand. 85(12):1273-9, 2002(Dec).  
**Keywords** : Electrocardiographic, Elderly, Rural Community.  
**Abstract** : Electrocardiographic findings in the elderly reflect both common cardiac diseases and physiologic ageing change. This cross-sectional population-based study explored the prevalence of various abnormalities in the electrocardiograms of active older people and those who are free from any cardiac pathology and determined their relationship to age and gender in a rural area of Thailand. Nine hundred and sixty three people aged 60 years or more were recruited. The electrocardiographic prevalence of ischemic heart disease, atrial fibrillation, left axis deviation and conduction defect were 5.5 per cent, 2.2 per cent, 2.5 per cent and 3.1 per cent respectively. After excluding diseases potentially affecting the heart, the prevalence of atrial fibrillation, left axis deviation and conduction defect decreased to 1.3 per cent, 2.0 per cent and 2.2 per cent. The prevalence of atrial fibrillation and ischemic heart disease were significantly less ( $p = 0.015$  and  $0.003$ ) in the 80+ year old group. Regarding gender difference, only left axis deviation was found significantly more frequently in older men with an odds ratio of 5.23 (95% confidence interval, 1.28-30.29) in those who were free from diseases potentially affecting the heart. **IN CONCLUSION:** Atrial fibrillation should not be regarded as degenerative change, but the result of cardiac pathology instead. The most common electrocardiographic abnormality in normal older men was left axis deviation and was found consistently more often than in older women. Therefore, it is appropriate to investigate for any reversible causes of atrial fibrillation while it is not so for left axis deviation in older men.

**No. 210**

- Authors** : Atchaneeyasakul LO, Appukuttan B, McFarland T, Stout JT, Wichyanuwat P, Yenchitsomanus PT, Trinavarat A.  
**Title** : Survey of a large Thai family with lattice corneal dystrophy for mutations in the beta IG-H3 gene.  
**Source** : Investigative Ophthalmology and Visual Science. 43:1733 (Suppl.), 2002.  
**Keywords** : Family, Lattice corneal dystrophy, Mutation, Beta IG-H3 gene

**No. 211**

- Authors** : Atisook K, Kachinthorn U, Luengrojanakul P, Tanwandee T, Pakdirat P, Puapairoj A  
**Title** : Histology of gastritis and Helicobacter pylori infection in Thailand: A nationwide study of 3776 cases.  
**Source** : Helicobacter. 8(2):132-141, 2003(Apr).  
**Keywords** : Gastritis, Helicobacter pylori, Intestinal metaplasia, Atrophy  
**Abstract** : Background. Dyspepsia is a very common problem in Thailand. Etiology of gastritis, incidence of Helicobacter pylori and mode of transmission of Helicobacter pylori infection in the country was proposed. Methods. A nationwide study of gastric biopsy in 3776 dyspeptic patients from six different geographic regions for incidence of gastritis, type of gastritis, incidence of H.

pylori infection, gastric atrophic change and intestinal metaplasia in three age-groups of each region was done. Results. 58.7% of dyspeptic patients had histological gastritis. Pangastritis was the most common type (77.3%) with mostly mild active inflammation (60.6%) and was found most commonly in the age group 31-60 years. Incidence of gastritis was slightly lower in the coastal and peninsular community compared with the mountain, jungle, semiarid plateau and fertile plain communities. Geographic factor, socioeconomic status and dietary habit were proposed to be important factors in inducing gastritis. *H. pylori* infection was found in 48.2% of dyspeptic patients with high incidence in the age-group 31-60 years (63.7%) and 98.2% of *H. pylori* infection was found to be associated with gastritis. Semi-arid plateau, mountain, jungle and fertile plain communities had high incidences of *H. pylori* infection varying from 54.0 to 67.1% while the coastal and peninsular communities had low incidences of 32%. Oral to oral spread is proposed to be the mode of bacterial transmission. Incidences of gastric atrophic change and intestinal metaplasia were low in this country and were found in 11.6% and 8.2% of subjects, respectively, with no significantly different distribution in geographic regions. Type I or intestinal type was found to be the most common type of intestinal metaplasia.

**No. 212 (38)**

- Authors** : Attatippaholkun WH, Lek-ngam P, Bejrachandra S, Attatippaholkun MK.  
**Title** : A novel molecular method for HIV-1 proviral DNA detection: non-radioactively--reversed probe hybridization and nested PCR.  
**Source** : Southeast Asian J Trop Med Public Health. 33(1):72-9, 2002 (Mar).  
**Keywords** : HIV-1, Novel molecular method, Nested PCR, ENV-gene.  
**Abstract** : A novel molecular method for HIV-1 proviral DNA detection comprising two main techniques: nested PCR, amplifying a target sequence of the ENV-gene of HIV-1, and nonradioactively-reversed probe hybridization for the detection of the amplified target sequence. The dual amplification of inserted HIV-1 proviral DNA in each DNA sample to be tested was performed by nested PCR in two steps: firstly with two outer primers covering the target sequence of the ENV-gene of HIV-1; secondly with two 5'-biotinylated primers specific to the target sequence. The biotinylated PCR product could be visualized as a single band of 141bps in length on agarose gel stained with ethidium bromide. For the confirmation of the primary result, a method of reversed probe hybridization, using a nylon membrane immobilized with the oligonucleotide probe specific to the target sequence, was established. The oligonucleotide probe was given a homopolymer tail with terminal deoxyribonucleotidyl-transferase; the tail was spotted onto a nylon membrane and bound covalently by UV irradiation. Owing to its length, the tail bound to the nylon, leaving the oligonucleotide probe free to hybridize. Hybridization of the amplified target sequence to the immobilized probe was accomplished by a simple colorimetric reaction involving the enzymatic oxidation of a colorless chromogen that yielded a purple color wherever hybridization occurred.

**No. 213**

- Authors** : Balachandra K, Matsuo K, Sutthent R, Hoisanka N, Boonsarthorn N, Sawanpanyalert P, Warachit P, Yamazaki S, Honda M.
- Title** : Characteristic of HIV-1 in V3 loop region based on seroreactivity and amino acid sequences in Thailand.
- Source** : Asian Pacific Journal of Allergy and Immunology. 20 (2):93-98, 2002(Jun).
- Keywords** : Human-Immunodeficiency-Virus, Injecting Drug-Users, T-Cell-Line, Enzyme-Immunoassay, Type-1 Clones, Subtype-E, Infection, Domain, Antibodies, Specimens.
- Abstract** : The third variable (V3) domain of the envelop (env) protein has been used for determining genetic subtype and phenotypic characteristics of human immunodeficiency virus type 1 (HIV-1) isolates. Based on the seroreactivity of the HIV-1 subtype by V3 peptide binding enzyme immunoassay (EIA) of 351 samples obtained in 1998 from HIV-1 infected individuals and AIDS patients, we found that 283 (80.6%) were subtype E, 20 (5.7%) were subtype B, 28 (8.0%) were cross-reactive between both types and 20 (5.7%) were non-typeable. The degree of seroreactivity of HIV-1 subtype E decreased significantly when, the amino acid at the crown of the V3 loop was substituted from a GPGQ motif to GPGR motif. Interestingly, AIDS patients who had V3 sequences of subtype E as GPGR motif had a stronger immunoreactivity to GPGQ motif peptides than to GPGR motif peptides, in contradiction for their proviral sequences. The results suggested that mutations in the V3 loop may lead to a changed immunoreactivity that makes HIV-1 mutants unrecognizable or allow escape from the primary immune response by means of neutralizing sensitivity. In connection with vaccine development, it should be pointed out that the combination of V3 sequencing and peptide EIA could provide a novel approach to obtain a primarily infected virus sequence as a target for a preventive AIDS vaccine.

**No. 214**

- Authors** : Bamroongsuk P, Yi Q, Harper CA, McCarty DJ.
- Title** : Delivery of photocoagulation treatment for diabetic retinopathy at a large Australian ophthalmic hospital: comparisons with national clinical practice guidelines.
- Source** : Clinical and Experimental Ophthalmology. 30(2):115-119, 2002(Apr).
- Keywords** : Australia, diabetic retinopathy, clinical practice guidelines, ophthalmology
- Abstract** : Objective: To determine if the delivery of photocoagulation for diabetic retinopathy at a large Australian ophthalmic hospital conforms with Australian National Health and Medical Research Council clinical practice guidelines. Methods: A retrospective medical record review was conducted of all patients who had initial laser treatment for diabetic retinopathy at the Royal Victorian Eye and Ear Hospital from January 1997 to December 1998. Results: The study included 322 eyes from 203 patients. The mean age was 65.8 years (range 18-89 years) and the mean duration of diabetes was 14.7 years (range 1-40 years). Panretinal photocoagulation (PRP) alone was performed in 37 eyes over a mean number of 2.6 sessions. The median waiting time for these procedures was 14 days (range 0-146 days) and the median follow-up time was 7.1 weeks (range 1-25 weeks). Focal treatment was performed (without PRP) in 238 eyes and 55.5% of these cases required repeat focal treatment for persistent clinically significant macular oedema. Median waiting time for focal treatment was 20 days (range 0-302 days) and the median follow-up time after treatment was 12.1 weeks (range 1.7-42.0 weeks). Focal and PRP treatment was used in 47 eyes that had maculopathy concurrently with proliferative retinopathy. Focal treatment was applied before (or at the same

session as) the PRP wherever possible. Conclusions: The study indicates that the application of photocoagulation and follow up for diabetic retinopathy at this tertiary referral institution conforms closely with Australian clinical practice guidelines.

**No. 215**

- Authors** : Banchuin N, Boonyasrisawat W, Pramukkul P, Vannasaeng S, Ploybutr S, Yenchitsomanus P.  
**Title** : Lymphoproliferative response to glutamic acid decarboxylase in fibrocalculous pancreatopathy.  
**Source** : Diabetes Research and Clinical Practice. 56 (1):77-79, 2002(Apr).  
**Keywords** : Dependent Diabetes-Mellitus, Chronic-Pancreatitis, Exocrine.

**No. 216**

- Authors** : Banchuin N, Boonyasrisawat W, Pulsawat P, Vannasaeng S, Deerochanawong C, Sriussadaporn S, Ploybutr S, Pasurakul T, Yenchitsomanus PT.  
**Title** : No abnormalities of reg1 alpha and reg1 beta gene associated with diabetes mellitus.  
**Source** : Diabetes Research and Clinical Practice. 55(2):105-11, 2002(Feb).  
**Keywords** : Reg1 Alpha, Reg1 Beta, Diabetes Mellitus, PCR-SSCP.  
**Abstract** : In order to investigate whether there would be any association between abnormalities of either reg1 alpha or reg1 beta gene and diabetes mellitus in man, these two genes were analyzed in 42 patients with type 1 diabetes mellitus, 12 with fibrocalculous pancreatopathy, 37 with type 2 diabetes mellitus, and 22 normal controls, by PCR-SSCP analysis and nucleotide sequencing technique. Polymorphism in the reg1 alpha gene resulted in three mobility patterns in the PCR-SSCP analysis, due to nucleotide constituents at position -10 before exon 1 being either C/C, T/C or T/T. These three mobility patterns were observed in every group of subjects. The analysis of reg1 beta gene showed nucleotide substitutions in exon 4 in one patient, exon 5 in another patient with type 1 diabetes, and in exon 4 and intron 5 in one patient with fibrocalculous pancreatopathy. The nucleotide substitutions in exon 4 in the patient with type 1 diabetes and that with fibrocalculous pancreatopathy occurred at codons 103 and 84 while that in exon 5 in the patient with type 1 diabetes occurred at codon 141, changing the codons from CAT to CAC, GTG to GCG, and ACT to AAT and resulting in H103H silent, V84A and T141N missense mutations, respectively. In conclusion, using PCR-SSCP and nucleotide sequence analyses, we did not find any association between abnormalities of either reg1 alpha or reg1 beta gene with any type of diabetes studied.

**No. 217**

- Authors** : Banchuin N, Boonyasrisawat W, Vannasaeng S, Dharakul T, Yenchitsomanus PT, Deerochanawong C, Ploybutr S, Sriussadaporn S, Pasurakul T.  
**Title** : Cell-mediated immune responses to GAD and beta-casein in type 1 diabetes mellitus in Thailand.  
**Source** : Diabetes Research and Clinical Practice. 55(3):237-45, 2002(Mar).  
**Keywords** : GAD, Beta-Casein, Type 1 Diabetes Mellitus.  
**Abstract** : We measured the cell-mediated immune response to GAD and bovine beta-casein in 38 type 1 and 37 type 2 diabetic patients who visited diabetic clinics or who were hospitalized in Bangkok, Thailand, and in 43 normal controls, by

using a lymphoproliferation assay. Positive results against GAD were found in 29/38 (76.3%) type 1, 6/37 (16.2%) type 2 diabetic patients and 1/43 (2.3%) normal controls. Positive results against bovine beta-casein were found in 18/38 (47.4%), 5/37 (13.5%) and 1/43 (2.3%) of these subjects, respectively. The frequencies of the positive results and the magnitude of the responses to both antigens in type 1 diabetic patients were significantly higher than those in the other two groups ( $P < 0.001$ ). In addition, the prevalence of a positive lymphoproliferative response to these antigens in type 1 diabetic patients was higher than that of anti-GAD antibody positivity in the same group of subjects (26.3%). Thus, the prevalence of positive lymphoproliferative response to GAD in type 1 diabetic patients studied was higher than the prevalence of other autoimmune markers previously reported in type 1 diabetic patients in Thailand.

**No. 218**

- Authors** : Bandea CI, Kubota K, Brown TM, Kilmarx PH, Bhullar V, Yanpaisarn S, Chaisilwattana P, Siriwasin W, Black CM.
- Title** : Typing of Chlamydia trachomatis strains from urine samples by amplification and sequencing the major outer membrane protein gene (omp1).
- Source** : Sexually Transmitted Infections. 77 (6):419-422, 2001(Dec).
- Keywords** : Genotype, Chlamydia Trachomatis, Urine.
- Abstract** : Objectives: To develop a novel protocol for the extraction, amplification, and sequencing of Chlamydia trachomatis MOMP gene (omp1) from urine, a non-invasive source, and apply it to an epidemiological study on the distribution of C trachomatis strains in a population of pregnant women in Thailand. Methods: The C trachomatis DNA was extracted from culture stocks and urine using a slightly modified commercially available kit, the High Pure PCR Template Preparation Kit (Roche Molecular Biochemicals, IN, USA). The PCR and sequencing primers used for the amplification and sequencing of the omp1 were designed based on the nucleotide sequence of multiple C trachomatis strains found in GenBank. The protocol for the extraction, amplification, and sequencing was tested on laboratory culture stocks of reference strains of all C trachomatis serovars and on urine samples collected in a cross sectional study designed to assess the prevalence of C trachomatis infections in the cities of Bangkok and Chiang Rai, Thailand. Results: The omp1 gene was successfully amplified and sequenced from 18 laboratory C trachomatis reference strains and from 45 C trachomatis positive urine clinical samples collected from asymptomatic pregnant women. Among clinical samples, we found nine different C trachomatis genotypes: F (11, 25%), D (10, 22.6%), H (5, 11.7%), K (5, 11.7%), E (4, 9.3%), Ia (3, 7%), B (3, 7%), Ja (2, 4.5%), and G (1, 2.3%). One specimen generated an omp1 DNA sequence pattern indicating the presence of a mixed infection with at least two different serovars. Conclusions: Urine is a convenient and reliable source for genotyping C trachomatis strains. A clear advantage of urine over traditional samples, such as cervical swabs, is that urine is a noninvasive source which makes collection easier and thus facilitates the enrolment of patients in clinical and epidemiological studies. In addition to typing, urine is increasingly used for diagnosis of C trachomatis infection by several commercially available nucleic acid amplification assays which represents a distinct advantage for collecting, transport, storage, and laboratory handling of samples.

**No. 219**

- Authors** : Bedavanija A, Brieger J, Lehr HA, Maurer J, Mann WJ.  
**Title** : Association of proliferative activity and size in acoustic neuroma: implications for timing of surgery.  
**Source** : Journal of Neurosurgery. 98(4):807-811, 2003(Apr).  
**Keywords** : Ki-67, Proliferating Cell Nuclear Antigen, Apoptosis, Acoustic Neuroma.  
**Abstract** : Object. Acoustic neuroma is the most frequent benign tumor of the cerebellopontine angle, and surgery is still the most common form of treatment. To gain better insight into the dysregulated mechanisms causing growth of acoustic neuroma, the authors studied the proliferative activity of 34 consecutive samples by analyzing immunohistochemical staining with Ki-67 and proliferating cell nuclear antigen (PCNA), and apoptosis based on the terminal deoxynucleotidyl transferase-mediated deoxyuridine triphosphate nick-end labeling. Data from these analyses were correlated with clinical parameters (that is, tumor size, duration of symptoms, and patient age). Methods. Apoptotic cells were found in none of the tumors. Proliferation measured on staining with Ki-67 and PCNA correlated with tumor size, but not with patient age or duration of symptoms. The authors demonstrated that tumors 18 mm or smaller in diameter have lower proliferation indices and growth rates, compared with tumors larger than 18 mm with high proliferative indices and growth rates. Additionally, they observed that these more aggressive, larger tumors occur mostly in patients younger than 50 years of age. Conclusions. Patients with tumors larger than 18 mm in diameter and who are younger than 50 years of age sustain an enhanced risk for fast-growing tumors because of these lesions' enhanced proliferative activity. For these patients the authors recommend active therapy.

**No. 220**

- Authors** : Benjapibal M, Sunsaneevitayakul P, Boriboonthirunsarn D, Sutanthavibul A, Chakorngowit M.  
**Title** : Color Doppler ultrasonography for prediction of malignant ovarian tumors.  
**Source** : Journal of the Medical Association of Thailand. 85(6):709-15, 2002(Jun).  
**Keywords** : Color Doppler Ultrasonography, Malignant Ovarian Tumors.  
**Abstract** : The purpose of this cross-sectional study was to evaluate whether the pulsatility index determined by the color Doppler sonography could be used to distinguish between benign and malignant ovarian tumors. A total of 120 patients who had their ovarian tumors removed surgically at the Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University were included in the study. Each patient had color Doppler sonography performed prior to laparotomy. The Doppler results were compared to the histological diagnosis of the ovarian tumors. Of the 113 patients whose intratumoral blood flow could be evaluated, the pulsatility index was significantly lower in malignant lesions than in benign lesions (0.85 +/- 0.46 vs 1.63 +/- 0.64,  $p < 0.001$ ). The sensitivity, specificity, and accuracy of the pre-operative pulsatility index ( $< \text{or} = 1.0$ ) in detecting malignant ovarian tumors were 82.9 per cent, 80.8 per cent, and 81.4 per cent, respectively; with 65.9 per cent positive predictive value, 91.3 per cent negative predictive value, 19.2 per cent false positive rate, and 17.1 per cent false negative rate. The present results suggest that color Doppler sonography may be a useful clinical tool in the pre-operative evaluation of ovarian masses. However, the pulsatility indexes showed considerable overlap between benign and malignant lesions, indicating that color Doppler sonography has limitations in the differentiation of benign from malignant ovarian masses. The cost of the equipment and experience requirement also limits its use in general gynecologic practice.

No. 221

**Authors**

: Beral V, Hamajima N, Hirose K, Rohan T, Calle EE, Heath CW, Coates RJ, Liff JM, Talamini R, Chantarakul N, Koetsawang S, Rachawat D, Morabia A, Schuman L, Stewart W, Szklo M, Bain C, Schofield F, Siskind V, Band P, Coldman AJ, Gallagher RP, Hislop TG, Yang P, Kolonel LM, Nomura AMY, Hu J, Johnson KC, Mao Y, De Sanjose S, Lee N, Marchbanks P, Ory HW, Peterson HB, Wilson HG, Wingo PA, Ebeling K, Kunde D, Nishan P, Hopper JL, Colditz G, Gajalakshmi V, Martin N, Pardthaisong T, Solpisornkosol S, Theetranont C, Boosiri B, Chutivongse S, Jimakorn P, Virutamasen P, Wongsrichanalai C, Ewertz M, Adami HO, Bergkvist L, Magnusson C, Persson I, Chang-Claude J, Paul C, Skegg DCG, Spears GFS, Boyle P, Evstifeeva T, Daling JR, Hutchinson WB, Malone K, Noonan EA, Stanford JL, Thomas DB, Weiss NS, White E, Andrieu N, Bremond A, Clavel F, Gairard B, Lansac J, Piana L, Renaud R, Izquierdo A, Viladiu P, Cuevas HR, Ontiveros P, Palet A, Salazar SB, Arsitizabal N, Cuadros A, Tryggvadottir L, Tulinius H, Bachelot A, Le MG, Peto J, Franceschi S, Lubin F, Modan B, Ron E, Wax Y, Friedman GD, Hiatt RA, Levi F, Bishop T, Kosmelj K, Primic-Zakelj M, Ravnihar B, Stare J, Beeson WL, Fraser G, Bulbrook RD, Cuzick J, Duffy SW, Fentiman IS, Hayward JL, Wang DY, McMichael AJ, McPherson K, Hanson RL, Leske MC, Mahoney MC, Nasca PC, Varma AO, Weinstein AL, Moller TR, Olsson H, Ranstam J, Goldbohm RA, van den Brandt PA, Apelo RA, Baens J, de la Cruz JR, Javier B, Lacaya LB, Ngelangel CA, La Vecchia C, Negri E, Marubini E, Ferraroni M, Gerber M, Richardson S, Segala C, Gatei D, Kenya P, Kungu A, Mati JG, Brinton LA, Hoover R, Schairer C, Spirtas R, Lee HP, Rookus MA, van Leeuwen FE, Schoenberg JA, McCredie M, Gammon MD, Clarke EA, Jones L, Neil A, Vessey M, Yeates D, Appleby P, Banks E, Bull D, Crossley B, Goodill A, Green J, Hermon C, Key T, Langston N, Lewis C, Reeves G, Collins R, Doll R, Peto R, Mabuchi K, Preston D, Hannaford P, Kay C, Rosero-Bixby L, Gao YT, Jin F, Yuan JM, Wei HY, Yun T, Zhiheng C, Berry G, Cooper Booth J, Jelihovsky T, MacLennan R, Shearman R, Wang QS, Baines CJ, Miller AB, Wall C, Lund E, Stalsberg H, Shu XO, Zheng W, Katsouyanni K, Trichopoulou A, Trichopoulos D, Dabancens A, Martinez L, Molina R, Salas O, Alexander XE, Anderson K, Folsom AR, Hulka BS, Bernstein L, Enger S, Haile RW, Paganini-Hill A, Pike MC, Ross RK, Ursin G, Yu MC, Longnecker MP, Newcomb P, Bergkvist L, Kalache A, Farley TMM, Holck S, Meirik O.

**Title**

: Alcohol, tobacco and breast cancer - collaborative reanalysis of individual data from 53 epidemiological studies, including 58515 women with breast cancer and 95067 women without the disease.

**Source**

: British Journal of Cancer. 87(11):1234-1245, 2002.

**Keywords**

: Breast cancer, Alcohol, Tobacco, Smoking, Collaborative analysis.

**Abstract**

: Alcohol and tobacco consumption are closely correlated and published results on their association with breast cancer have not always allowed adequately for confounding between these exposures. Over 80% of the relevant information worldwide on alcohol and tobacco consumption and breast cancer were collated, checked and analysed centrally. Analyses included 58515 women with invasive breast cancer and 95067 controls from 53 studies. Relative risks of breast cancer were estimated, after stratifying by study, age, parity and, where appropriate, women's age when their first child was born and consumption of alcohol and tobacco. The average consumption of alcohol reported by controls from developed countries was 6.0 g per day, i.e. about half a unit/drink of alcohol per day, and was greater in ever-smokers than never-smokers, (8.4 g per day and 5.0 g per day, respectively). Compared with women who reported drinking no alcohol, the relative risk of breast cancer

was 1.32 (1.19 - 1.45,  $P < 0.00001$ ) for an intake of 35 - 44 g per day alcohol, and 1.46 (1.33 - 1.61,  $P < 0.00001$ ) for greater than or equal to 45 g per day alcohol. The relative risk of breast cancer increased by 7.1% (95% CI 5.5-8.7%;  $P < 0.00001$ ) for each additional 10 g per day intake of alcohol, i.e. for each extra unit or drink of alcohol consumed on a daily basis. This increase was the same in ever-smokers and never-smokers (7.1 % per 10 g per day,  $P < 0.00001$ , in each group). By contrast, the relationship between smoking and breast cancer was substantially confounded by the effect of alcohol. When analyses were restricted to 22 255 women with breast cancer and 40 832 controls who reported drinking no alcohol, smoking was not associated with breast cancer (compared to never-smokers, relative risk for ever-smokers=1.03, 95% CI 0.98 - 1.07, and for current smokers=0.99, 0.92 - 1.05). The results for alcohol and for tobacco did not vary substantially across studies, study designs, or according to 15 personal characteristics of the women; nor were the findings materially confounded by any of these factors. If the observed relationship for alcohol is causal, these results suggest that about 4% of the breast cancers in developed countries are attributable to alcohol. In developing countries, where alcohol consumption among controls averaged only 0.4 g per day, alcohol would have a negligible effect on the incidence of breast cancer. In conclusion, smoking has little or no independent effect on the risk of developing breast cancer; the effect of alcohol on breast cancer needs to be interpreted in the context of its beneficial effects, in moderation, on cardiovascular disease and its harmful effects on cirrhosis and cancers of the mouth, larynx, oesophagus and liver.

**No. 222**

- Authors** : Boonpongmanee C, Zauszniewski JA, Boonpongmanee S.  
**Title** : Psychometric properties of the self-control schedule: Thai version.  
**Source** : Research in Nursing and Health. 25(6):471-478, 2002.  
**Keywords** : Self-Control Schedule, Psychometric Properties, Thai SCS, Pregnant Women, Learned Resourcefulness, HIV.  
**Abstract** : The psychometric Properties of the Thai version of the Self-Control Schedule (SCS), a measure of learned resourcefulness, were examined. Data were collected from 77 pregnant women who were HIV positive and 103 pregnant women who were HIV negative. Back-translation was completed, and agreement between the two content experts as determined by the Content Validity Index was 86%. To assure the equivalence of the translated SCS, English and Thai versions were completed by 16 bilinguals, and the two versions were found to correlate highly ( $r = .95$ ;  $P < .01$ ). Internal consistency reliability for the Thai version of the SCS was .81. Confirmatory factor analysis was used to establish construct validity. The results suggest that the Thai version of the SCS has promise for use with pregnant Thai women; however, modification of some items would improve its understandability and cross-cultural applicability. Further Psychometric testing in larger and more diverse samples is recommended.

**No. 223**

- Authors** : Boon-Yasidhi V, Tarugsa J, Suwanwattana C, Soising L.  
**Title** : Risperidone in the treatment of autistic Thai children under 4 years of age.  
**Source** : Journal of the Medical Association of Thailand. 85:S784-9 (Suppl 2), 2002(Aug).  
**Keywords** : Autistic, Children.  
**Abstract** : The authors report five cases of very young children with autistic disorder, aged 2.1-3.7 years, treated with risperidone, as part of the comprehensive intervention. Treatment with risperidone 0.25-0.5 mg per day was associated

with clinically meaningful decreases in problem behaviors including hyperactivity, irritability, and aggressiveness. There were also improvements in social relatedness and cooperation with developmental treatment. All of the children tolerated the medication well and experienced no untoward effects. The efficacy of risperidone in the treatment of very young children with autistic disorder reported here is consistent with findings in the limited number of cases previously reported in the literature. Controlled studies are needed to confirm the efficacy and safety of risperidone in the treatment of these children.

**No. 224**

- Authors** : Boonyasrisawat W, Banchuin N, Pattanapanyasat K, Deerochanawong C, Yenchitsomanus PT, Ploybutr S, Vannasaeng S.
- Title** : Flow cytometry for the analysis of T cells expressing CD69 after stimulation with glutamic acid decarboxylase.
- Source** : Asian Pac J Allergy Immunol. 20(1):37-42, 2002.
- Keywords** : T cells, CD69, Glutamic Acid Decarboxylase.
- Abstract** : Type 1 diabetes mellitus is a T-cell mediated autoimmune disease in which the insulin-producing pancreatic beta cells are selectively destroyed. We recently found that the detection of cell-mediated immune response to glutamic acid decarboxylase (GAD) was more useful than the detection of specific autoantibodies for the diagnosis of type 1 diabetes mellitus. In this study, we established a flow cytometric analysis for the detection of activated T cells in whole venous blood, obtained from diabetic patients and normal controls after stimulation by GAD. Two milliliters of peripheral venous blood and 6 hours incubation time were used for performing the test. It was found that 33% (3/9) type 1 diabetic patients, 7.7% (1/13) type 2 diabetic patients and neither patients with fibrocalculous pancreatopathy nor normal controls had  $>$  or  $=$  20% CD8+ T cells expressing CD69. The results suggest that flow cytometry may be a useful tool for the detection of surrogate markers of type 1 diabetes mellitus.

**No. 225**

- Authors** : Boonyasrisawat W, Pulsawat P, Yenchitsomanus PT, Vannasaeng S, Pramukkul P, Deerochanawong C, Sriussadaporn S, Ploybutr S, Pasurakul T, Banchuin N.
- Title** : Analysis of the reg1alpha and reg1beta gene transcripts in patients with fibrocalculous pancreatopathy.
- Source** : Southeast Asian J Trop Med Public Health. 33(2):365-72, 2002.
- Keywords** : Reg1beta Gene, Fibrocalculous Pancreatopathy, Reverse-Transcription Polymerase Chain Reaction, Single Strand Conformation Polymorphism.
- Abstract** : Fibrocalculous pancreatopathy is a form of diabetes, associated with tropical chronic calcific pancreatitis, in which islet beta-cell loss and pancreatic stone formation are found. It is likely to be a multifactorial disease with both genetic and environmental components. Regenerating (reg) gene encodes protein that has been involved in pancreatic lithogenesis and the regeneration of islet cells and therefore the abnormality of reg genes could be associated with fibrocalculous pancreatopathy. In this study, reg1a and reg1beta mRNAs were isolated from peripheral blood lymphocytes obtained from 16 patients with fibrocalculous pancreatopathy, 42 patients with type 1 diabetes, 37 patients with type 2 diabetes, and 22 normal controls. mRNAs were amplified by reverse-transcription polymerase chain reaction (RT-PCR) and analysed by a

single strand conformation polymorphism (SSCP) technique. The reg1alpha and reg1beta mRNAs were isolated, indicating the ectopic expression of these genes in peripheral blood lymphocytes; however, variation among mobility patterns was not observed in the SSCP analysis of the RT-PCR products. The results indicated that there was no abnormality of the reg1a and reg1beta mRNAs obtained from the study groups.

**No. 226**

- Authors** : Bunnag C, Prasansuk S, Nakorn AN, Jareoncharsri P, Atipas S, Angsuwarangsee T, Tansuriyawong P, Thongyai ML, Polpathapee S, Siriyanda C, Chongkolwatana C, Ungkanon K, Chongvisal S, Kescool P, Tantiniorn W.
- Title** : Ear diseases and hearing in the Thai elderly population. part II. A one year follow-up study.
- Source** : Journal of the Medical Association of Thailand. 85(5):532-9, 2002.
- Keywords** : Ear, Hearing, Elderly.
- Abstract** : The ear and hearing survey of the Thai elderly in 14 urban communities around Siriraj Hospital was repeated one year after the first survey in order to detect any changes. Altogether 556 elderly people came for follow-up examination, 191 were males, 365 were females, the average age was 68.2 years (60-88 years). Ear disease was diagnosed by ENT specialists in 80 cases which implied that the prevalence of ear disease was 14.4 per cent. This was not statistically significantly different from the prevalence of ear disease in the survey conducted in the previous year and although the elderly who had ear diseases in the first survey had already been treated, the prevalence did not decrease. Some elderly people only had ear diseases in this survey. Hearing evaluation by pure tone audiometry was performed in 549 elders. There were 12.4 per cent who had bilateral, moderate to severe hearing loss which was 2.9 per cent higher than in the previous survey. The hearing level had also deteriorated in 14.3 per cent of the elderly people. Tympanometry was performed in 556 cases and showed that 10.5 per cent had a conductive hearing loss. When audiometry and tympanometry of the same elderly people were evaluated together, 49.2 per cent of them had a sensorineural hearing loss, 3 per cent had a conductive hearing loss and 6.5 per cent had a conductive or mixed type hearing loss. When the results of audiometry were compared with the self identification/perception of their hearing reported by the elderly in the questionnaires, they were not reliable. In conclusion, a one-year follow-up study of the prevalence of ear disease and hearing impairment in the elderly showed that the prevalence of ear disease was still high and had not changed significantly. Concerning hearing impairment, not only had the prevalence increased, but also the severity of hearing loss. Therefore, the authors stress the need to implement the "Ear and Hearing Care" program for the elderly both in rural and urban communities at least once a year in order to improve quality of life of the elderly Thai people and to prevent complications of ear disease.

**No. 227**

- Authors** : Bunnag C, Prasansuk S, Nakorn AN, Jareoncharsri P, Atipas S, Angsuwarangsee T, Tansuriyawong P, Thongyai ML, Polpathapee S, Siriyanda C, Chongkolwatana C, Ungkanon K, Chongvisal S, Kescool P, Tantinikorn W.
- Title** : Ear diseases and hearing in the Thai elderly population. Part I. A comparative study of the accuracy of diagnosis and treatment by general practitioners vs ENT specialists.
- Source** : Journal of the Medical Association of Thailand. 85(5):521-31, 2002.
- Keywords** : Ear, Hearing, Elderly.
- Abstract** : The prevalence of ear disease and hearing disability in elderly Thais in 14 urban communities around Siriraj Hospital was studied. The accuracy of diagnosis and treatment of common ear diseases and of screening for hearing loss in the elderly between general practitioners (GP) and Ear, Nose and Throat (ENT) specialists was also compared. Elderly people aged 60 years or more who had registered with the health care program had their ear and hearing check-up performed by GPs and ENT specialists from mobile team. Altogether, 980 subjects were included, 332 were males, 648 were females, (male:female ratio 1:2). Their ages ranged from 60-96 years with an average age of 68.5 years. The prevalence of ear disease diagnosed by ENT specialists was 16.3 per cent (95% CI = 14.0-18.6), 12.5 per cent was external ear disease and 2.7 per cent middle ear disease. The most common ear problem was impacted ear wax (8%), the second most common problem was otitis externa (4.3%). Compared with an ENT specialist, the ability of a GP to diagnose ear diseases had a sensitivity of 46.5 per cent and a specificity of 80.3 per cent, the positive predictive value of their diagnoses was 31.5 per cent. The efficacy of the treatment of ear diseases in 51 elderly people by GPs and in 63 elderly people by ENT specialists was statistically significantly different ( $p = 0.02$ ). Hearing screening by the GP using whisper or the watch test performed in 650 elderly people revealed abnormal findings (could not hear) in 70 cases or 10.8 per cent. Hearing screening using pure tone audiometry in 980 elderly people showed abnormal hearing level in 508 cases (52.4%). 9.5 per cent of them had a bilateral moderate to severe degree of hearing impairment. There was no difference in the level of hearing impairment between males and females or between right and left ears. The prevalence of hearing loss increases with increasing age. Tympanometry performed by an acoustic impedance machine in 980 of the elderly showed a conductive hearing loss in 85 cases (9.1%). The authors conclude that the prevalence of ear disease in elderly people living in the urban community around Siriraj Hospital is quite high. Although the ear diseases commonly encountered were not serious, if left untreated they may lead to complication and decreased hearing. Therefore, the proficiency of GPs in the management of common ear diseases in every community should be regularly maintained. Hearing impairment is very prevalent and increases with age. Thus, screening for hearing loss using an audiometer and/or acoustic impedance is recommended for all senior citizens in their community at least once a year. Early detection of elderly persons who could benefit from a properly fitted hearing aid will certainly improve the quality of life and may prevent psychiatric and functional impairment of the Thai elderly population.

**No. 228**

- Authors** : Bunnag C, Suprihati D, Wang DY.  
**Title** : Patient preference and sensory perception of three intranasal corticosteroids for allergic rhinitis.  
**Source** : Clinical Drug Investigation. 23(1):39-44, 2003.  
**Keywords** : Aqueous Nasal Spray, Fluticasone Propionate, Acetonide, Levocabastine.  
**Abstract** : Objective: To evaluate the medication preference, sensory perceptions and compliance of allergic rhinitis patients after a single administration of three intranasal corticosteroids. Study design and subjects: In-this double-blind, comparative, crossover study, 364 patients were randomised to receive fluticasone propionate (FP), mometasone furoate (MF) and triamcinolone acetonide (TAA) nasal sprays. Patients completed a preference questionnaire, including a product preference and compliance evaluation after administration to determine the acceptability of each product. Results: The results indicate that TAA was judged more comfortable ( $p = 0.0406$ ), had less odour ( $p < 0.0001$ ) and had a-significantly greater overall liking ( $p = 0.0008$ ) compared with FP and MF. The nasal spray 'most preferred to be prescribed' was TAA (38.2%), followed by FP (36.8%) and MF (24.9%). Furthermore, 82.3% of the patients indicated that they would definitely comply with a doctor's prescription for TAA, compared with 39.6% for FP and 20.5% for MF. Conclusion: The results of this study indicate that TAA is the most favourable nasal spray in terms of preference and sensory perceptions for patients with perennial or seasonal allergic rhinitis.

**No. 229**

- Authors** : Buranakitjaroen P, Phoojaroenchanachai M, Saravich S, Sangprasert P.  
**Title** : The efficacy and tolerability of an angiotensin II receptor blocker, telmisartan, in Thai patients with mild to moderate essential hypertension.  
**Source** : Journal of the Medical Association of Thailand. 85(9):968-77, 2002(Sep).  
**Keywords** : Angiotensin II, Telmisartan, Moderate Essential Hypertension.  
**Abstract** : This open-labeled single-blinded study was performed to evaluate the efficacy and tolerability of telmisartan in the treatment of mild to moderate essential hypertension. Each patient was assigned to take a placebo for 4 weeks followed by once daily-titrated telmisartan (40-80 mg) for 8 weeks. "Office BP" and "24-hour ambulatory BP" measurements (24-h ABPM) were recorded as scheduled. Thirty-one patients (10 males: 21 females) with a mean age of 48.1 years were enrolled. The final SBP/DBP reductions of  $14.6 \pm 14.2/9.9 \pm 6.2$  mm Hg were obtained. Full response defined as office DBP reduction of  $\geq 10$  mm Hg from baseline and/or DBP  $< 90$  mm Hg was achieved in 73.3 per cent of cases. Excluding 5 cases of white coat HT diagnosed by 24-h ABPM, full response rate (DBP reduction of  $\geq 10$  mm Hg from baseline and/or  $< 85$  mm Hg) was 76 per cent. Trough to peak ratio and smoothness index for SBP/DBP were highly acceptable (0.75/0.76 and 0.97/1.01, respectively). There were 4 cases of adverse events (2 cases of dizziness, 1 case of headache, and 1 case of acute myocardial infarction).

**No. 230**

- Authors** : Chaisilwattana P, Chokeyhaibulkit K, Chalermchockcharoenkit A, Vanprapar N, Sirimai K, Chearskul S, Sutthent R, Opartkiattikul N.  
**Title** : Short-course therapy with zidovudine plus lamivudine for prevention of mother-to-child transmission of human immunodeficiency virus type 1 in Thailand.  
**Source** : Clinical Infectious Diseases. 35(11):1405-1413, 2002.  
**Keywords** : Maternal-Infant Transmission, Perinatal Transmission, Risk-Factors, Women, Hiv-1, Combination, Fetal, Trial.

**Abstract** : To evaluate the efficacy and safety of short-course therapy with zidovudine plus lamivudine for reduction of perinatal transmission of human immunodeficiency virus type 1 (HIV-1), a single-arm, open-label, prospective, nonrandomized study was conducted. One hundred six treatment-naive pregnant women received zidovudine (300 mg) plus lamivudine (150 mg) twice daily from week 34 of gestation until the onset of labor. During labor, zidovudine and lamivudine were given every 3 It. Neonates received zidovudine syrup for 4 weeks and were bottle fed. The median maternal virus load and CD4(+) cell count at weeks 32-34 of gestation were 4.33 log(10) copies/mL and 274 cells/mm(3), respectively. At delivery, the mothers' mean decrease in virus load was 1.55 log(10) copies/mL and the mean increase in CD4(+) cell count was 93 cells/mm(3), compared with enrollment levels. Three neonates were HIV-1 infected, for a transmission rate of 2.83% (95% confidence interval, 1%-8%). There were no serious adverse events in the mothers. Adverse events noted in neonates were anemia (in 6 neonates), elevated transaminase levels (in 1), and thrombocytopenia (in 3). Short-course therapy with zidovudine plus lamivudine appeared to be safe and effective for prevention of perinatal transmission of HIV-1.

**No. 231**

**Authors** : Chaiswing L, Oberley TD, Cole MP, Szweda LL, Ittarat W, St Clair D.  
**Title** : In vivo analysis of ROS/RNS in adriamycin-induced cardiotoxicity.  
**Source** : Free Radical Biology and Medicine. 33: 328 (Suppl. 2), 2002.  
**Keywords** : ROS/RNS, Cardiotoxicity

**No. 232**

**Authors** : Chaiwat O, Vacharaksa K, Prakanrattana U.  
**Title** : Awareness under general anesthesia.  
**Source** : Journal of the Medical Association of Thailand. 85:S948-55 (Suppl.3), 2002(Sep).  
**Keywords** : Anesthesia.  
**Abstract** : **OBJECTIVE:** To determine the occurrence and associated factors of awareness in the patients undergoing elective surgery under general anesthesia. **METHODS:** A prospective cohort study of 802 patients, scheduled for elective general and gynecological surgery under endotracheal anesthesia was performed at Siriraj Hospital. Balanced general endotracheal anesthesia was performed as routine practice. Standard monitoring and clinical observation for movement, tear, sweat, and eye-lid opening were obtained. They were interviewed during the first 12 hours after a surgical completion. If the patient was suspected to have awareness, then a second interview was performed on postoperative day 3. **RESULTS:** The ages of the study population were 16-84 years. There were 659 females and 143 males. Awareness was found in 5 patients (3 females, 2 males) as an occurrence of 0.62 per cent. The only positive clinical observation found was hand movement. The cause of awareness should be inadequate anesthesia. Apart from that, data gathered from interviews with the group who had no awareness (797 patients), the last thing they could remember before unconsciousness was auditory perception. Also hearing someone calling was the first thing upon awakening. Most of the patients did not dream during anesthesia. No serious psychological disorder occurred. **CONCLUSION:** The occurrence of awareness was 0.62 per cent in the patients undergoing surgery under anesthesia. Inadequate anesthesia was the most likely cause of awareness. No postoperative sequelae of awareness occurred.

**No. 233**

- Authors** : Chalermchockcharoenkit A, Louisirotnakul S, Roongpisuthipong A, Sirimai K, Sutthritpongsa P, Wasi C.
- Title** : Rapid human immunodeficiency virus diagnostic test during the intrapartum period in pregnant women who did not receive antenatal care.
- Source** : Journal of the Medical Association of Thailand. 85(6):703-8, 2002(Jun).
- Keywords** : Pregnant Women, Antenatal Care, HIV.
- Abstract** : The main barrier to implementation of antiretroviral drugs in HIV-infected pregnant women is the lack of antenatal care (ANC). From April 1999 to December 2001, the prevalence of pregnant women not receiving ANC and coming for delivery in Siriraj Hospital was 7.3 per cent (2,152/29,484) and the prevalence of HIV infection among this group was 5.7 per cent, substantially higher than that of 27,332 pregnant women receiving ANC in Siriraj Hospital (2.2%). Besides developing interventions to increase use of ANC, the test for diagnosis of HIV infection during the intrapartum period should be rapid, inexpensive, highly sensitive and specific, easy to perform and results should be easy to interpret. The Determine Rapid Test for detection of HIV fulfills these criteria with 100 per cent sensitivity, 99.85 per cent specificity, 97.54 per cent positive predictive value, 100 per cent negative predictive value and 0.14 per cent false positive. To improve prevention of mother-to-child HIV transmission (PMTCT), the authors believe that this uncomplicated rapid HIV testing should be used during the intrapartum period to Thai-pregnant women who did not receive antenatal care and antiretroviral drugs might be offered as soon as possible for those testing HIV-positive and for their baby as chemoprophylaxis.

**No. 234**

- Authors** : Chareancholvanich K, Bourgeault CA, Schmidt AH, Gustilo RB, Lew WD.
- Title** : In vitro stability of cemented and cementless femoral stems with compaction.
- Source** : Clinical Orthopaedics and Related Research. (394):290-302, 2002.
- Keywords** : Total Hip-Arthroplasty, Bone Compaction, Component, Fixation, Replacement, Prosthesis, Allograft
- Abstract** : Rigidity of initial fixation is a key factor contributing to the longevity of cemented and cementless femoral components in total hip arthroplasty. The objective of this study was to measure the initial stability of primary cemented and cementless femoral components under load when 15 pairs of cadaveric femurs were prepared by outward compaction of femoral cancellous bone in situ or by conventional extraction broaching. Three-dimensional micromotion was measured at proximal and distal locations on the femoral components using a device with spherical targets and linear variable differential transformers. External loads simulating the stance phases of level walking and stair ascent were applied to the femoral components by a materials test machine. Bone preparation method significantly affected each of the translation and rotation components of micromotion with cemented and cementless fixation. Micromotion with broaching was consistently greater than with compaction. Compared with compaction, the magnitude of the micromotion translation vector for broaching was an average of 3.9 (standard deviation, 3.1) times greater with cemented fixation, and an average of 2.3 (standard deviation, 1.4) times greater with cementless fixation. The results of this study showed the effectiveness of compaction of femoral cancellous bone in improving the initial stability of cemented and cementless femoral components in primary total hip arthroplasty.

**No. 235**

- Authors** : Chaudakshetrin P, Ketuman P.  
**Title** : Anesthetic pain management in Siriraj Hospital: a retrospective review.  
**Source** : Journal of the Medical Association of Thailand.  
85:S858-65 (Suppl.3), 2002(Sep).  
**Keywords** : Anesthetic.  
**Abstract** : Neural blockade has been used as the single method to anesthetize a part of the body or used in combination with general anesthesia to lessen perioperative pain. Currently, nerve blocks are used for diagnostic, prognostic, therapeutic and prophylactic purposes for management of chronic, acute and cancer pain in a Pain Clinic. Reviewing the records of the 3,349 patients at Siriraj Pain Clinic, we found 2,662 and 687 cases had chronic and acute pain problems respectively, and only 646 patients were treated with anesthetic interventions during 1990 to 1998. They consisted of 317 male and 329 female. The techniques included stellate ganglion block, paravertebral nerve block, celiac plexus block, hypogastric plexus block, mesenteric plexus block, sacral nerve block, epidural steroid, lumbar sympathectomy, first and second thoracic sympathectomy, facet joints injection, sacroiliac joint injection, intravenous regional block with guanethidine or ketanserin, continuous opioid infusion, intravenous lidocaine infusion, and a phentolamine test. The common problems of pain included brachial plexus injury, chronic spinal pain, herpetic neuralgia, ischemic pain, central post-stroke pain, and causalgia. This retrospective review showed that 38 per cent of them reported 50 per cent pain relief with temporary effect. 34 per cent experienced good and satisfactory pain relief while 9 per cent reported excellent pain relief. 17 per cent did not gain benefit from any technique of pain relief and about 2 per cent could not be evaluated due to they did not return for follow-up. One serious complication after thoracic sympathectomy was brachial plexus injury. The neural blockade is proven to be one of the useful adjunct in the management of chronic pain but the selection of the technique is subjected to its critical appraisal.

**No. 236**

- Authors** : Chearskul S, Bhothisuwan K, Churintrapun M, Semprasert N, Onreabroi S.  
**Title** : Estrogen receptor-alpha mRNA in primary breast cancer: relationship to estrogen and progesterone receptor proteins and other prognostic factors.  
**Source** : Asian Pac J Allergy Immunol, 20(1):13-21, 2002.  
**Keywords** : Estrogen receptor-alpha, mRNA, Breast cancer.  
**Abstract** : The estrogen receptor (ER)-alpha protein and ER mRNA were measured in 314 primary breast cancer patients by enzyme immunoassay (EIA) and reverse-transcription polymerase chain reaction (RT-PCR) assay, respectively. The positivity of ER protein was 53% while of ER mRNA was 37.6%. A significant positive association between ER phenotype and ER mRNA was observed ( $r = 0.40$ ,  $p < 0.0001$ ) with a positive-negative agreement between them of 71.8%. The percentage of ER-negative, progesterone receptor (PR)-positive breast tumors was 1.9% by EIA and 7% by RT-PCR assay. This may indicate a difference in ER variants in these studied patients. The ER protein and ER mRNA status were inversely related to tumor size and p53 positivity. Also, ER protein was frequently positive in patients with a higher number of lymph node invasions, well to moderate nuclear differentiated tumor cells and negative c-erbB-2 status. The difference of the ER or ER mRNA status regarding ages, menopausal status, tumor stages and histological types was not shown. In the present study, ER mRNA did not demonstrate a closer relationship to prognostic indicators of breast cancer than ER protein. Before including the ER mRNA assessment in routine investigations of breast cancer,

its relationship to prognostic factors and survival outcome should be further assessed with a higher number of patients and a longer follow-up time.

**No. 237**

**Authors** : Chearskul S, Chotpitayasunondh T, Simonds RJ, Wanprapar N, Waranawat N, Punpanich W, Chokeyphaibulkit K, Mock PA, Neeyapun K, Jetsawang B, Teeraratkul A, Supapol W, Mastro TD, Shaffer N.

**Title** : Survival, disease manifestations, and early predictors of disease progression among children with perinatal human immunodeficiency virus infection in Thailand.

**Source** : Pediatrics. 110(2):25, 2002(Aug).

**Keywords** : Vertical Human Immunodeficiency Virus, Transmission, Children, Human Immunodeficiency Virus Infection, Thailand.

**Abstract** : Objective. To describe survival and signs of human immunodeficiency virus (HIV) infection in perinatally infected children in Thailand. Methods. At 2 large Bangkok hospitals, 295 infants born to HIV-infected mothers were enrolled at birth from November 1992 through September 1994 and followed up with clinical and laboratory evaluations every 1 to 3 months for 18 months. Infected children remained in follow-up thereafter. For the infected children, we used data collected through October 2000 to estimate survival times and compare characteristics among those whose disease progressed at rapid (died within 1 year), intermediate (died at 1-5 years), and slow (survived at least 5 years) rates. Results. None of the 213 uninfected children died during the follow-up period. Of the 68 infected children, 31 (46%) died; median survival was 60 months (95% confidence interval: 31-89 months). The most common cause of death was pneumonia (52% of deaths). Thirty-two children (47%) started antiretroviral therapy. Six children died in their first year before developing specific signs of HIV infection; all others developed signs of HIV infection between 1 and 42 months old (median: 4 months). Severe clinical (Centers for Disease Control and Prevention Class C) conditions were diagnosed in 23 children at a median age of 12 months, 15 (65%) of whom died a median of 3 months later. Compared with children whose disease progressed slowly, those whose disease progressed rapidly gained less weight by 4 months old (median 1.7 vs 2.6 kg), and their mothers had higher viral loads (median 5.1 vs 4.5 log<sub>10</sub> copies/mL) and lower CD4(+) counts (median 350 vs 470 cells/ $\mu$ L) at delivery. Conclusions. Among HIV-infected Thai children, survival times are longer than among children in many African countries, but shorter than among children in the United States and Europe. Signs of HIV develop early in most children. Growth failure and advanced maternal disease can predict rapid HIV disease progression and may be useful markers for treatment decisions.

**No. 238**

**Authors** : Chearskul S, Onreabroi S, Churintrapun M, Semprasert N, Bhothisuwan K

**Title** : Immunohistochemical study of c-erbB-2 expression in primary breast cancer.

**Source** : Asian Pacific Journal of Allergy and Immunology. 19(3):197-205, 2001.

**Keywords** : Prognostic-Significance, Predictive Value, P53, Neu-Oncogene, Protein Overexpression, Carcinoma, Endocrine Therapy, Estrogen-Receptor, Her-2/Neu, Growth.

**Abstract** : An immunohistochemical (IHC) study of the c-erbB-2 protein was performed in paraffin-embedded tissues from 506 primary breast carcinomas. An overexpression of c-erbB-2 was detected in 32% of the tumors and was correlated with a negative estrogen receptor status, increasing tumor size as

well as axillary lymph node involvement. The five-year disease free survival was analyzed in 183 patients who have been followed for at least five years. No statistically, significant association of c-erbB-2 status with survival was shown. However, longer survival in women over 50 years compared to under W years of age was detected among the c-erbB-2 positive patients. In the multivariate Cox's regression analysis, lymph node and vascular invasions were independent prognostic indicators among these patients. But c-erbB-2 status and other factors did not predict the relapse of breast cancer. However, these data may not negate the benefit of c-erbB-2 detected by IHC for identification of patients: who have a poor prognosis and require more aggressive adjuvant therapy. Further studies in a larger group of patients with longer follow-up time may provide more valid information.

**No. 239**

- Authors** : Chierakul N, Chaiprasert A, Tingtoy N, Arjratanakul W, Pattanakitsakul SN.  
**Title** : Can serial qualitative polymerase chain reaction monitoring predict outcome of pulmonary tuberculosis treatment?  
**Source** : *Respirology*. 6(4):305-9, 2001(Dec).  
**Keywords** : Polymerase chain reaction, Pulmonary tuberculosis, Treatment.  
**Abstract** : **BACKGROUND:** The aim of this study was to assess the use of qualitative one-tube nested polymerase chain reaction (PCR) for monitoring the treatment response in smear-positive pulmonary tuberculosis, and the factors determining the negative conversion of sputum smear, culture, and PCR during treatment. **METHODOLOGY:** A total of 53 patients receiving a standard short course of chemotherapy with 24 months follow-up period after treatment cessation were included in the study. Sputum specimens were collected serially for smear, culture, and PCR until the treatment was complete. **RESULTS:** The conversion rate for sputum culture, smear, and PCR at 8 weeks after treatment were 84.9, 58.5, and 47.1%, and at 16 weeks of treatment were 100, 88.7, and 79.2%, respectively. At the end of the treatment period, there were four PCR persisters, one of whom had disease relapse. Only cavitory disease had an influence over the negative conversion of the smear and PCR at 8 weeks (RR 3.5, 95% CI 1.04-11.95, P=0.04 for smear; RR 5.06, 95% CI 1.196-21.42, P=0.03 for PCR). **CONCLUSION:** Qualitative PCR was not useful for monitoring therapy in smear-positive pulmonary tuberculosis. Mycobacterium DNA was cleared slowly in cavitory disease. The PCR may be performed at the time of treatment cessation to identify those with potential for disease relapse.

**No. 240**

- Authors** : Chinachoti T, Kessler P, Kirkham A, Werawatganon T.  
**Title** : Remifentanil vs morphine for patients in intensive care unit who need short-term mechanical ventilation.  
**Source** : *Journal of the Medical Association of Thailand*. 85:S848-57 (Suppl.3), 2002(Sep).  
**Keywords** : Remifentanil, Morphine, Double-Blind Study.  
**Abstract** : This randomized, double-blind study compared the safety and efficacy of remifentanil (9 microg/ kg/h) with morphine (0.045 mg/kg/h plus a bolus dose of 0.025 mg/kg). One hundred and eighty nine Intensive Care Unit (ICU) patients with normal renal function or mild renal impairment requiring mechanical ventilation were included in this study. A pre-defined dosing algorithm permitted initial titration of the opioids to predetermine the optimal level of sedation and pain score. Supplementary infusion of midazolam (0.03 mg/kg/h) was given when additional sedation was required. The duration of optimal sedation during

the maintenance phase was 82.7 per cent and 84.3 per cent of the total time in the remifentanyl and morphine groups respectively. There were no statistically significant differences in the between-subject variability in the duration of optimal sedation between the two treatment groups. Midazolam was not required in approximately 75 per cent of all patients. The patients in the morphine group required twice the amount of midazolam required by the remifentanyl group. The dosing algorithm facilitated rapid extubation in both groups. Remifentanyl provided comparable hemodynamic stability to morphine, and was not associated with an increase in cardiovascular adverse event. Remifentanyl is therefore considered to be effective and well tolerated in ICU patients.

**No. 241**

- Authors** : Chinachoti T, Niruthisard S, Tuntisirin O, Thienthong S, Khunsongkiet P, Payawal F, Camagay I, De Castro R.
- Title** : A double-blind, randomized study comparing postoperative pain management using epidural ropivacaine with intravenous ketorolac or intravenous ketorolac alone following transabdominal hysterectomy.
- Source** : Journal of the Medical Association of Thailand. 85:S837-47 (Suppl.3), 2002(Sep).
- Keywords** : Double-Blind Study, Postoperative, Visual Analogue Pain Scale.
- Abstract** : **OBJECTIVE:** The aim of this study is to compare the effect on postoperative pain of epidural ropivacaine in combination with intravenous ketorolac with intravenous ketorolac alone following transabdominal hysterectomy. **DESIGN:** A multi-center, randomized, double-blind study was conducted in Thailand and the Philippines to assess postoperative pain management in 107 patients given ketorolac alone or in combination with epidural ropivacaine following transabdominal hysterectomy. Pain score was assessed using a 100-mm visual analogue pain scale (VAS). **RESULTS:** The VAS scores for pain on coughing and at rest were significantly better in the ropivacaine group. The number of patients who asked for morphine in addition was higher in the ketorolac group compared to the ropivacaine + ketorolac group. The time taken to carry out the first three ambulatory steps was similar for both the two treatment groups. A higher degree of motor block was observed in the ropivacaine group over time. The adverse events observed were similar in both groups. **CONCLUSION:** We demonstrated that epidural infusion of ropivacaine in addition with intravenous ketorolac gave superior pain relief at rest and on coughing in patients undergoing transabdominal hysterectomy when compared to the group receiving intravenous ketorolac alone.

**No. 242**

- Authors** : Chinachoti T, Suraseranivongse S, Valairucha S, Tritrakarn T.
- Title** : Quality assessment of anesthesia service at Siriraj Hospital.
- Source** : Journal of the Medical Association of Thailand. 85:S866-74 (Suppl.3), 2002(Sep).
- Keywords** : Anesthesia.
- Abstract** : As part of a quality assurance program, the quality of the anesthesia service at Siriraj Hospital was assessed by using a newly developed data collecting system to find the incidence of clinical indicators. During a 7-month period (June-December 2001), 14,036 anesthetics were included for evaluation. The mortality rate within 24 hours and CPR rate during anesthesia were equal at 20.6/10,000. Other clinical indicators were major anesthetic complications (mainly airway, respiratory and cardiovascular system) 144.8/10,000, drug mishaps and adverse drug reactions 6.4/10,000, anesthetic equipment related complications 3.5/10,000

and patient's dissatisfaction 30.6/10,000. Patterns of some complications were also reported. The implications of the results; comparison to international standard, prioritization of the problems, baseline information before intervention, recognition of complication patterns and guidance to future system management and research projects; were discussed. In conclusion, we demonstrated the effective data collecting system and its results and implication for quality assurance program.

**No. 243**

- Authors** : Chirdjirapong V, Poothong V, Ruangruk S, Komoltri C, Mahakittikun W, Visitsunthorn N, Vichyanond P.  
**Title** : House dust mite allergens accumulate more rapidly in synthetic and kapok mattresses than in coconut and sponge mattresses.  
**Source** : Journal of Allergy and Clinical Immunology. 109(1):108 (Suppl. S), 2002.  
**Keywords** : House Dust Mite, Coconut, Sponge.

**No. 244**

- Authors** : Chokephaibulkit K, Danchaivijitr S, Boonpragaigaew G, Dhiraputra C, Vanprapa N, Visitsunthorn N, Trakulsomboon S.  
**Title** : The outbreak of *Serratia marcescens* bacteremia in a pediatric ward, Siriraj Hospital 1997.  
**Source** : Journal of the Medical Association of Thailand. 85:S674-81(Suppl.2), 2002(Aug).  
**Keywords** : *Serratia Marcescens* Bacteremia, Pediatric.  
**Abstract** : Between October 20 and November 11, 1997, *Serratia marcescens* bacteremia was identified in 8 patients in a pediatric ward at Siriraj Hospital. The organism was isolated from 17 blood and 3 bone marrow specimens. The only common associated factor in these patients was that they all had received an intravenous fluid infusion. In the attempt to investigate the source of *S. marcescens* implicated in the outbreak, 108 specimens of intravenous fluid, 3 intravenous fluid bottle caps, 4 specimens from intravenous fluid tubing sets, 21 specimens of antiseptics used on the ward, 28 specimens of rectal swabs from patients on the ward, 1 sample of blood culture media prepared by the hospital for routine use, and 62 environmental specimens including hand swabs of the medical personnel, refrigerator, air conditioning, milk samples, room air, water sink, wooden splint and adhesive tape used to immobilize the intravenous access. Of 227 specimens sent for culture, *S. marcescens* was isolated from only one specimen collected from the in-use intravenous fluid given to a patient with *Serratia* bacteremia. *S. marcescens* was not found in any other surveillance culture. The 8 patients were placed under quarantine in the same room with an exclusive nursing team. With the investigation and intervention including monitoring for meticulous hand washing of the ward staff, the outbreak was stopped within 7 days. Although the investigation failed to discover the environmental reservoir of *S. marcescens* in this outbreak, the data suggested that intravenous fluid was probably the route of transmission and the medical personnel played an important role in spreading the infection.

**No. 245**

- Authors** : Chokephaibulkit K.  
**Title** : Combination vaccines.  
**Source** : Journal of the Medical Association of Thailand. 85:S694-9(Suppl.3), 2002(Aug).  
**Keywords** : Vaccines, Haemophilus Influenzae Type B, Hepatitis B, Hepatitis A.  
**Abstract** : Recently multiple individual vaccines were put together into one syringe. This is ideal to simplify the administration of vaccines and reduce emotional distress from multiple injections. However, combination of many vaccines may interfere with the properties of each individual antigen and complicate the schedule. From earlier studies, most of the combinations of diphtheria-tetanus-pertussis (whole-cell) vaccine (DTPw), Haemophilus influenzae type b vaccine (Hib), hepatitis B vaccine (HBV), and inactivated polio vaccine (IPV) were safe and adequately immunogenic. On the other hand, there was a notable reduction in anti-PRP when Hib was combined with acellular pertussis vaccine (DTPa). Combination of hepatitis A vaccine and HBV was safe and effective. Those coming soon in the pipeline are DTPa-Hib-HBV, MMR-varicella, pneumococcal-meningococcal. With the increase in demand, health-care providers need to be acquainted to these combination vaccines. The bottom line is to make sure that the children get vaccination appropriately.

**No. 246**

- Authors** : Chotivichit A, Fujita T, Wong TH, Kostuik JP, Sieber AN.  
**Title** : Role of femoral ring allograft in anterior interbody fusion of the spine.  
**Source** : J Orthop Surg (Hong Kong). 9(2):1-5, 2001(Dec).  
**Keywords** : Femoral ring allograft, Anterior interbody.  
**Abstract** : A review was carried out on 59 patients (10 males and 49 females) who had anterior interbody fusion performed with femoral ring allograft packed with autograft bone chips with a minimum follow up of 2 years. The average age at the time of surgery was 49.1 year old (26 to 75). The total number of levels grafted was 141. The diagnosis consisted of multiple degenerative disease in 6, degenerative change below the long segment of fusion for scoliosis in 9, osteoporosis with collapsed fracture in 3, pseudarthrosis after posterior laminectomy and fusion in 35, congenital scoliosis in 3, scoliosis in 2 and paralytic scoliosis due to multiple sclerosis in one. The distribution of levels fused was T12-L1 in 6, L1-2 in 12, L2-3 in 17, L3-4 in 22, L4-5 in 35 and L5-S1 in 39. The remaining 10 levels were in the lower thoracic areas (T7-T12). The operations were performed as anterior fusion alone in 13 patients, one-stage anterior and posterior fusion in 26 patients and two-stage surgery in 20 patients. Anterior instrumentation was used in all 141 levels. At average follow-up (33.7 months) there was no significant change in allograft angles (average = 1.6 degrees). Fusion of the allograft was classified by Bridwell's grading system. At 24 months of the follow up, 97 % of the allografts were in grade I (fully incorporated) and 3% were in grade II (partially incorporated). Compared to 12 months follow-up only 76.2% of the grafts were in grade I, 28 % were in grade II and 0.8% were in grade III. Two patients had deep posterior infections which required further surgery (without resorption of the allograft anteriorly). One patient had a screw migration anteriorly which required removal. Three patients had persistence of radiolucent line at one of the vertebral end plates – graft interfaces but no subsidence of the graft or pain. In conclusion, the femoral ring allograft appeared to benefit the anterior interbody fusion in complex spinal surgery.

**No. 247**

- Authors** : Chuenchitra T, Wasi C, Louisirojchanakul S, Nitayaphan S, Suttent R, Cox JH, De Souza MS, Brown AE, Birx DL, Polonis VR.
- Title** : Longitudinal study of humoral immune responses in HIV type 1 subtype CRF01\_AE (E)-infected Thai patients with different rates of disease Progression.
- Source** : Aids Research and Human Retroviruses. 19(4):293-305, 2003.
- Keywords** : Immunodeficiency-Virus Type-1, Injecting Drug-Users, Dependent Cellular Cytotoxicity, Long-Term Nonprogressors, Neutralizing Antibodies, Aids Patients, Htlv-Iii, Hiv-1-Infected Subjects, V3-Specific Antibodies, Infected Patients.
- Abstract** : Identification of immune correlates associated with disease progression will provide information for HIV-1 vaccine design in countries such as Thailand, where the prevalent subtypes (B and CRF01\_AE [E]) are characterized. In this study, plasma viral load and humoral immune responses were measured in 20 HIV-1 subtype E-infected Thai patients with different rates of disease progression, based on CD4(+) T cell decline and clinical symptoms. Nine progressors (PRs) and 11 slower progressors (SPs) were evaluated. CD4(+) T cell counts were inversely correlated with viral load ( $p = 0.004$ ) and positively correlated with p24 Ab ( $p = 0.022$ ). In progressors, p24 Ab showed a significant decrease ( $p < 0.001$ ) over time. V3 and gp41 Ab did not change significantly in either group. Both CD4-binding site (CD4/gp120BS) and gp120 titers correlated positively with neutralizing antibody (NAb) against both a subtype E cell line-adapted virus (NP03) and a primary isolate (TH023). However, V3 Ab correlated only with NAb against NP03 ( $p < 0.001$ ). Increased NAb over time was observed more frequently in SPs as compared with PRs, against both the TH023 ( $p = 0.004$ ) and NP03 ( $p = 0.004$ ) viruses. Cross-clade antibody-dependent cellular cytotoxicity was demonstrated in both groups. These data suggest that in HIV-1 subtype E infection, declining p24 Ab titer is a predictive marker of disease progression, as described for subtype B. Furthermore, in subtype E-infected patients, slower progressors retain the immune competence to develop new antibody responses to Env over time; these evolving responses may contribute to prolonged survival during HIV-1 disease progression.

**No. 248**

- Authors** : Chuenkongkaew W, Chirapapaisan N.
- Title** : A prospective randomized trial of megadose methylprednisolone and high dose dexamethasone for traumatic optic neuropathy.
- Source** : Journal of the Medical Association of Thailand.85(5):597-603, 2002.
- Keywords** : Methylprednisolone, Dexamethasone, Traumatic Optic Neuropathy.
- Abstract** : **PURPOSE:** To determine whether the improvement in visual acuity obtained when using high dose dexamethasone in the treatment of traumatic optic neuropathy was comparable to that of megadose methylprednisolone. **METHOD:** A total of forty-four patients with traumatic optic neuropathy were prospectively randomized and selected to receive intravenous high dose dexamethasone or megadose methylprednisolone within 2 weeks of injury. Age, gender, cause of injury, interval from injury to treatment, initial, post-pulse, and final visual acuity were analysed statistically to compare the dexamethasone and methylprednisolone groups. **RESULTS:** The mean interval to treatment was not significantly different ( $p=0.28$ ) for the dexamethasone group at 5.5 days compared to the methylprednisolone group at 4.1 days. Visual improvement of at least two lines of the Snellen chart or two levels of unmeasured visual acuity was shown in 9 patients (37.5%) of the

dexamethasone group and 10 patients (50%) of the methylprednisolone group. There was no statistically significant difference between the initial and post-pulse visual acuity ( $p=1.0$ ) and the initial and final visual outcome ( $p=0.60$ ) in the dexamethasone group compared with the methylprednisolone group. CONCLUSION: There was no significant difference in the visual acuity obtained after treatment with intravenous dexamethasone or methylprednisolone for traumatic optic neuropathy.

**No. 249 (77)**

- Authors** : Chuenkongkaew WL, Lertrit P, Poonyathalang A, Sura T, Ruangvaravate N, Atchaneeyasakul L, Suphavitai R.
- Title** : Leber's hereditary optic neuropathy in Thailand.
- Source** : Japanese Journal of Ophthalmology. 45(6):665-668, 2001(Nov-Dec).
- Keywords** : Leber's Hereditary Optic Neuropathy, 11778 Mutation, Thailand.
- Abstract** : Purpose: To study the clinical features of Leber's hereditary optic neuropathy (LHON) in Thai patients as compared with patients in the United States, Europe, and other Asian countries. Methods: The blood mitochondrial DNA of patients from 19 Thai pedigree families was studied for LHON mutation by restriction enzyme analysis. Results: Mitochondrial mutation at nucleotide position 11778 was detected in 37 affected patients and 21 unaffected maternal relatives. Ten of the 19 families were sporadic in transmission. The male preponderance in affected patients was 76%. The onset of visual loss ranged from 6 to 53 years of age (mean = 21.5 years). Of the 31 patients whose eyes were affected bilaterally, 48.4% developed visual loss simultaneously. Unilateral visual loss was found in 2 patients but 1 already had a blind eye resulting from trauma. Onset interval between eyes was up to 12 months (mean = 2.3 months). No associated heart disease or neurological disorder was detected in our pedigrees. Hyperemic disc, retinal telangiectasia, and tortuosity of vessels appeared on ophthalmoscopy in 29% of the patients. Final visual outcome was 0.1, or worse in 82.3%, with a mean follow-up period of 19.5 months. Conclusion: The clinical features of LHON in Thai patients are similar to those found in patients harboring the 11778 mutation in the United States, Europe, and Japan. However, although there is a male predominance in all populations studied, this is not so marked in the European and Thai populations.

**No. 250**

- Authors** : Chumpathong S, Santawat U, Saunya P, Chimpalee R, Toomtong P.
- Title** : Comparison of different doses of epidural morphine for pain relief following cesarean section.
- Source** : Journal of the Medical Association of Thailand. 85:S956-62 (Suppl.3), 2002(Sep).
- Keywords** : Epidural Morphine, Pain Relief.
- Abstract** : Although epidural opioid analgesia after cesarean section can provide excellent postoperative pain relief, serious complications may occur after epidural morphine. Therefore, we performed this study to compare the efficacy and side effects of three different doses of epidural morphine for analgesia following cesarean section. Ninety healthy pregnant women who underwent cesarean delivery were randomly assigned to receive either 2.5, 3 or 4 mg of epidural morphine for postoperative analgesia. Pain intensity at rest and on movement using a visual analogue scale(0-10) was regularly assessed for 48 hours, the time to first analgesic requirement, the total analgesic dose, patient satisfaction and side effects were recorded. Chi square and ANOVA tests were used for statistical analyses. We

were unable to demonstrate any difference in pain relief, patient satisfaction, and side effects among the three groups. Epidural morphine provided sufficient pain relief for approximately 24 hours. About 27 per cent of the patients from each group were pain-free for up to 48 hours without further analgesics. Mild pruritus and nausea occurred in all three groups and there was no significant difference between them. No serious complications were observed. In conclusion low dose epidural morphine is effective in providing adequate analgesia following cesarean delivery.

**No. 251**

- Authors** : Cooksley WGE, Piratvisuth T, Wang YJ, Mahachai V, Chao YC, Tanwandee T, Chutaputti A, Chang WY, Zahm FE, Pluck N.  
**Title** : Evidence for the efficacy of peginterferon alfa-2a (40 KD) (pegasys) in the treatment of HBeAg-positive chronic hepatitis B (CHB) and impact of baseline factors.  
**Source** : Journal of Hepatology. 36:17 (Suppl. 1), 2002.  
**Keywords** : Hbeag-Positive, Chronic Hepatitis B.

**No. 252**

- Authors** : Daengsuwan T, Visitsunthorn N, Vichyanond P.  
**Title** : Wheat anaphylaxis in Thailand.  
**Source** : Journal of Allergy and Clinical Immunology. 109 (1): 1043 Suppl. S, 2002.  
**Keywords** : Anaphylaxis.

**No. 253**

- Authors** : Dejsomritrutai W, Wongsurakiat P, Chierakul N, Charoenratanakul S, Nana A, Maranetra KN.  
**Title** : Comparison between specified percentage and fifth percentile criteria for spirometry interpretation in Thai patients.  
**Source** : Respirology. 7(2):123-7, 2002(Jun).  
**Keywords** : Fifth Percentile, Lower Limit Of Normal, Pulmonary Function Test, Spirometry.  
**Abstract** : Objectives : The present study was conducted to determine the degree of agreement between the interpretation of spirometry using a specified percentage of predicted value (SPC) and the fifth percentile (FPC) as the cut off between normal and abnormal. Methodology: Spirometric values were collected for 1754 subjects attending the respiratory service at Siriraj Hospital between February 2000 and April 2001. These values included forced vital capacity (FVC), forced expiratory volume in 1 s (FEV1), FEV1/FVC, maximal mid-expiratory flow (FEF25-75%) and peak expiratory flow (PEF). A comparison of results between SPC and FPC was performed. The SPC cut-off values for FVC, FEV1, FEV1/FVC, FEF25-75% and PEF were 80% predicted, 80% predicted, 70%, 65% predicted and 80% predicted, respectively. The FPC cut-off values were calculated from reference equations for the Thai population. Inter-rater agreement was calculated as the kappa score. Results: High kappa scores were obtained for FVC (0.84), FEV1 (0.88) and FEF25-75% (0.80). However, poor agreement was found for FEV1/FVC (0.72) and PEF (0.61). When the cut-off values for SPC were modified to 90% of predicted values for FEV1/FVC and to 65% of predicted values for PEF, agreement was substantially improved to 0.92 and 0.89, respectively. Conclusions: Interpretation by SPC using cut-off values of 80% predicted for FVC and FEV1 and 65% predicted for FEF25-75% resulted in good agreement with FPC. However, the SPC cut-off values for FEV1/FVC and PEF should be modified to 90% predicted and 65% predicted, respectively.

**No. 254**

- Authors** : Densupsoontorn N, Jirapinyo P, Thamonsiri N, Wongarn R, Phosuya P, Tritiprat A, Patraarat S, Pidatcha P, Suwanthol L.
- Title** : Comparison of the nutrient content of fresh fruit juices vs commercial fruit juices.
- Source** : Journal of the Medical Association of Thailand. 85:S732-8(Suppl 2), 2002(Aug).
- Keywords** : Nutrient Content, Fruit Juices.
- Abstract** : **OBJECTIVE** : To compare the types and quantities of carbohydrate, electrolytes, pH and osmolarity of fresh fruit juices and commercial fruit juices. **MATERIAL AND METHOD** : Forty kinds of fresh fruits available in Thai markets were analyzed for types and quantities of carbohydrate, electrolyte, pH and osmolarity and compared with previously obtained data for commercial fruit juices. **RESULTS**: Most fresh fruit juices did not contain sucrose, whereas, commercial fruit juices mostly have sucrose in the range of 3-112 g/L. Although both fruit juices were acidic (pH varied from 3.6-6.7 and 3.2-5.8 of fresh juice and commercial juice), fresh fruit juices had a more neutral pH than commercial fruit juices. Apple, guava, orange, pear, and pineapple juices from commercial fruit juices had a high osmolarity compared with fresh fruit juices. All types of fresh fruit juices contained less sodium than commercial ones, whereas, most fresh fruit juices contained more potassium, phosphorus, and magnesium than commercial fluids. **CONCLUSION**: The nutrient content of fresh fruit juices and commercial fruit juices from the same kinds of fruits are not the same, possibly due to the manufacturing process. Therefore, physicians should know the composition of fruit juices in order to advise patients properly.

**No. 255**

- Authors** : Durongpisitkul K, Kruasukon S, Kangkagate C, Tanphaichitr VS.
- Title** : Early detection of cardiac involvement in beta-thalassemia children.
- Source** : Journal of the Medical Association of Thailand. 85:S667-73(Suppl 2), 2002(Aug).
- Keywords** : Cardiac, Beta-Thalassemia, Children, Chronic Hemolytic Anemia.
- Abstract** : **BACKGROUND**: Beta-thalassemia major and beta-thalassemia/HbE are the important causes of chronic hemolytic anemia in Thailand. The objectives of the study were to determine variables associated with cardiac involvement in asymptomatic beta-thalassemia patients. **PATIENTS AND METHOD**: The authors studied beta-thalassemia major and beta-thalassemia/HbE patients who came to the clinic between July 1st 1999 and July 31st 2000. There were 211 asymptomatic patients included in study. Their ages ranged from 2.6 to 18.2 years. Previous clinical history including blood transfusion and iron chelation were recorded. All patients received a thorough physical examination, chest X-ray, electrocardiogram and echocardiogram. Patients who had abnormal systolic or diastolic function detected by echocardiogram were identified as having cardiac involvement. **RESULTS**: Cardiac involvement was found in 26 patients (12.3%). There was no difference in physical examination between patients who had and did not have cardiac involvement. Abnormal chest X-Ray defined as cardiothoracic (CT) ratio >0.55 and electrocardiogram (ECG) findings of left or right ventricular hypertrophy were associated with cardiac involvement. Other associated findings were older age and lower average pretransfusion hematocrit (23 +/- 6.6%). **CONCLUSIONS**: In asymptomatic beta-thalassemia children, chest X-ray and ECG should be used for screening patients for the detection of cardiac involvement.

**No. 256**

- Authors** : Durongpisitkul K, Soongswang J, Laohaprasitiporn D, Nana A, Prachuabmoh C, Kangkagate C.
- Title** : Immunoglobulin failure and retreatment in Kawasaki disease.
- Source** : Pediatric Cardiology. 24(2):145-148, 2003.
- Keywords** : Kawasaki Disease, Immunoglobulin.
- Abstract** : Several cases of Kawasaki disease (KD) were unresponsive to the Initial treatment with intravenous immunoglobulin (IVIG). We retrospectively analyzed all children admitted with KD to determine the occurrence and variables associated with the initial IVIG treatment failure. All patients who fulfilled the criteria for KD and were treated with a single dose (2 g/kg) of IVIG between January 1995 and August 2001 were enrolled. An analysis of the patients who had initially failed to respond to IVIG was performed. A total of 120 patients were enrolled during the study period. There were 68 boys (56.7%). Fourteen patients (11.6%) were found to be unresponsive to initial IVIG treatment. Patients who were anemic (Hb < 10 g/dl), had a high neutrophil count (>75%), a high band count, and low albumin were at risk of failure to respond to a single dose of IVIG. We found no correlation among age, gender, days since starting IVIG treatment, and erythrocyte sedimentation rate (ESR) with failure of the initial IVIG treatment. There were 12 patients (10%) who developed coronary artery aneurysms. The failure of a single dose of IVIG treatment occurred in up to 11.6% of our Kawasaki patients. We found that low hemoglobin (<10 g/dl), high neutrophil count (>75%), high band count, and a low albumin were associated with the requirement for retreatment with a second dose of IVIG.

**No. 257**

- Authors** : Durongpisitkul K, Soongswang J, Laohaprasitiporn D, Nana A, Prachuabmoh C, Kangkagate C.
- Title** : Gammaglobulin failure and retreatment in Kawasaki disease.
- Source** : Pediatric Research. 53(1):132, 2003.
- Keywords** : Kawasaki disease.

**No. 258**

- Authors** : Durongpisitkul K, Soongswang J, Laohaprasitiporn D, Nana A, Sriyoschati S, Ponvilawan S, Subtaweesin T, Kangkagate C.
- Title** : Comparison of atrial septal defect closure using amplatzer septal occluder with surgery.
- Source** : Pediatric Cardiology. 23(1):36-40, 2002(Jan-Feb).
- Keywords** : Atrial Septal Defect, Amplatzer Septal Occluder.
- Abstract** : Our study reports the results of a comparison of closure of atrial septal defect (ASD) surgically with transcatheter closure using the Amplatzer septal occluder. Patients having an ASD and a surgical closure or transcatheter closure between January 1999 and July 2000 were selected. There were 103 patients who had ASD. All 64 patients in group 1 (surgery) had a successful operation, with only 2 patients with a mild residual shunt. There were 39 patients enrolled for transcatheter closure of the ASD (group 2). Four patients were excluded initially. The median age for group 1 was 25 years (range 2.3-64 years) compared to 11.7 years (range 2-69 years) in group 2 (p = 0.035). In group 1, the mean ASD diameter measured was 28.4 +/- 10.2 mm compared to 23.4 +/- 5.7 mm in group 2 (p = 0.003). In 29 patients, devices were deployed with sizes from 10 mm to 30 mm (median 24 mm). Three patients were excluded because a larger device (>30 mm) was not available and devices were not successfully deployed in

another 3 patients. One patient had a device embolized into the right ventricle (surgical removal and closure of the ASD). Complications occurred in 13 patients in group 1 and 4 patients in group 2. Complete occlusion occurred in 27 of 28 group 2 patients (96.4%) during the follow-up period (10.2 +/- 5.4 months). The Amplatzer septal occluder is a new device for closure of different-sized ASDs. The intermediate-term follow-up demonstrated excellent closure results. The benefit for each patient was demonstrated in less morbidity and less time spent in the hospital.

**No. 259**

- Authors** : Durongpisitkul K, Tang NL, Soongswang J, Laohaprasitiporn D, Nana A, Kangkagate C.
- Title** : Cardiac magnetic resonance imaging of atrial septal defect for transcatheter closure.
- Source** : Journal of the Medical Association of Thailand. 85:S658-66(Suppl 2), 2002(Aug).
- Keywords** : Atrial Septal Defect, Traditional Transesophageal, Magnetic Resonance Imaging.
- Abstract** : **BACKGROUND:** The location, size of the defect and age of the patient are the major determining factors for transcatheter closure of an atrial septal defect (ASD). The precise shape and anatomy surrounding the defect cannot always be understood by the traditional transesophageal (TEE) echocardiographic technique. **OBJECTIVES:** The authors compared the measurement of ASD size and atrial septal rim using cardiac Magnetic Resonance Imaging (MRI) and TEE to the balloon sizing technique and device size. **PATIENTS AND METHOD:** Patients having an ASD which met established criteria were selected for evaluation with cardiac MRI and TEE for a closure procedure. Comparison of the ASD imaging and sizing between the different methods was made. **RESULTS:** There were 22 patients who had complete transcatheter closure. The mean age and standard deviation of the patients was 33.2+/-15.1 (8-67) years old. The mean weight of the patients was 51.6+/-13.1 (20-99) kg. The average cardiac MRI measurement of the ASD was 24.9+/-6.4 mm compared to the TEE measurement of 20.8+/-5.5 mm. The transcatheter balloon measurement of the ASD was 25.2+/-6.9 (11-36) mm and the device closure size was 24.8+/-6.6 (11-36) mm. The correlation coefficient of cardiac MRI to device closure size was  $r = 0.784$  ( $p < 0.001$ ) when compared to TEE measurement to device closure size;  $r=0.761$  ( $p = 0.001$ ). **CONCLUSION:** The authors demonstrated the capability of the cardiac MRI in assessment of the ASD morphology and anatomy for transcatheter closure of the ASD with an Amplatzer Septal Occluder. Cardiac MRI can provide information about the type, location, size of the defect and direct visualization of the atrial septum anatomy. This detailed information enabled us to provide a safer, more effective application of the ASD occluder.

**No. 260**

- Authors** : Eiermann TH, Vejbaesya S, Prestel H, Roepke A, Muller-Myhsok B, Schmitt-Egenolf M.
- Title** : Association and linkage of human leukocyte antigens with psoriasis - Revisited.
- Source** : Infusion Therapy and Transfusion Medicine-Infusionstherapie und Transfusionsmedizin. 29(6):326-330, 2002.
- Keywords** : HLA, Psoriasis
- Abstract** : Until recently blood group and HLA antigens have been used extensively to study associations with human disease. Case control studies reproducibly showed significant associations of particular HLA antigens with various human diseases. These were mainly autoimmune diseases such as juvenile

diabetes, multiple sclerosis, rheumatoid arthritis, psoriasis and celiac disease, but also others, e.g. narcolepsy and familial hemochromatosis. With restriction fragment length polymorphism (RFLP), short tandem repeats (STR) and recently single nucleotide polymorphism of DNA, many polymorphic markers spread across the entire genome have been available for about 10 years. These markers were successfully applied in family-based linkage studies to localize disease genes. Today we recognize that successful positional cloning with linkage analysis is mainly limited to rare diseases with Mendelian trait. But for most of the common familial diseases (e.g. juvenile diabetes and psoriasis) a simple Mendelian trait seems unlikely. A polygenic model is more appropriate. This complicates the search and definition of susceptibility genes. In addition within the HLA gene region linkage studies are hampered by allelic association between neighboring genes (linkage disequilibrium), effecting disease associations. Case control studies in different ethnic populations may be a solution to this problem.

**No. 261**

- Authors** : Espana EM, Prabhasawat P, Grueterich M, Solomon A, Tseng SCG.  
**Title** : Amniotic membrane transplantation for reconstruction after excision of large ocular surface neoplasias.  
**Source** : British Journal of Ophthalmology. 86(6):640-645, 2002.  
**Keywords** : Stem-Cell Deficiency, Corneal Epithelial-Cells, Intraepithelial Neoplasia, Mitomycin-C, Surgical-Management, Limbal Autograft, Conjunctival, Melanoma, 5-Fluorouracil, Dysplasia.  
**Abstract** : Aim: To evaluate the clinical outcome of patients in whom ocular surface reconstruction was performed using amniotic membrane transplantation (AMT) after the excision of large (>20 mm square) ocular surface neoplasias (OSN). Methods: A non-comparative interventional case series. In 16 eyes of 16 patients, excision of large OSN including conjunctival intraepithelial neoplasia (CIN), primary acquired melanosis, and malignant melanoma was followed by adjunctive cryotherapy and suturing of a single layer of amniotic membrane (AM) with the basement membrane side facing up to the healthy bordering tissue. Epithelial healing, complications, and tumour recurrences were analysed. Results: During a mean follow up of 23.7 (SD 11, range 11-43) months, ocular surface healing was rapid and complete in all cases. One complication of pyogenic granuloma was noted, Tumour recurrence occurred in one out of 10 CIN cases (10%), no recurrences were observed in the patients with melanotic lesions. Conclusions: AMT in lieu of conjunctival or mucosal autograft is an effective substrate for reconstructing the ocular surface following excision of large OSN. AMT is effective in managing large OSN by avoiding the complications that may be associated with conventional removal, specifically in cases where the limbal architecture is destroyed by surgical resection or adjuvant therapies.

**No. 262**

- Authors** : Foongladda S, Haouharn P, Sakulmaiwatana P, Chaiprasert A.  
**Title** : Comparative evaluation of Candi Select test and conventional methods for identification of *Candida albicans* in routine clinical isolates.  
**Source** : Mycoses. 45(3-4):75-8, 2002(Apr).  
**Keywords** : *Candida Albicans*, Routine Clinical Isolates.  
**Abstract** : The Candi Select test (Sanofi Diagnostics, Pasteur, Marnes-La-Coquette, France) is a new yeast-selective medium for the identification of *Candida albicans* in the clinical laboratory. The performance of this test was compared with the

conventional methods of chlamyospore formation, germ tube formation and carbohydrate fermentation. Four hundred and twenty clinical yeast isolates from 412 fresh clinical specimens, including 283 *C. albicans*, 59 *C. tropicalis*, 39 *Trichosporon* spp., 19 *C. glabrata*, 11 *Cryptococcus neoformans* and 9 other yeasts, were evaluated. Colonies of *C. albicans* produced a blue-green colour on the Candi Select media which could be distinguished from the other yeasts with the naked eye within 24-48 h. The sensitivity and specificity of the Candi Select test for the identification of *C. albicans* were 99.65% and 97.08%, respectively. The blue-green colonies of *C. albicans* were easy to identify and recognize in mixed cultures and did not need detailed microscopic examination.

**No. 263**

- Authors** : Foongladda S, Roengsanthia D, Arjattanakool W, Chuchottaworn C, Chaiprasert A, Franzblau SG.
- Title** : Rapid and simple MTT method for rifampicin and isoniazid susceptibility testing of *Mycobacterium tuberculosis*.
- Source** : International Journal of Tuberculosis and Lung Disease. 6(12):1118-1122, 2002.
- Keywords** : *M. tuberculosis*, Susceptibility testing, MTT.
- Abstract** : The MTT method for rifampicin and isoniazid susceptibility testing of *Mycobacterium tuberculosis* was developed by using bacterial suspension prepared from colonies on solid media. The MTT tube assay in 1 ml Middlebrook 7H9 broth was completed within 4 days for rifampicin (RMP) and within 7 days for isoniazid (INH). When MTT assay results with 279 *M. tuberculosis* clinical isolates were compared with those of the conventional proportion method on Lowenstein-Jensen medium, high specificity and sensitivity values of 100% and 94.1%, respectively, for RMP susceptibility testing, and 99.5% and 89.2%, respectively, for INH susceptibility testing were obtained. The accuracy of the MTT method for RMP and INH was >0.97 concordance with the proportion method. The MTT method is simple, inexpensive and rapid. The high level of agreement with the conventional proportion method suggests a potential to rapidly detect drug-resistant *M. tuberculosis* in developing countries, as only basic microbiological equipment is need.

**No. 264**

- Authors** : Fukada K, Tomiyama H, Wasi C, Matsuda T, Kusagawa S, Sato H, Oka S, Takebe Y, Takiguchi M.
- Title** : Cytotoxic T-cell recognition of HIV-1 cross-clade and clade-specific epitopes in HIV-1-infected Thai and Japanese patients.
- Source** : Aids. 16(5):701-711, 2002.
- Keywords** : HIV-1 clade E, non-clade B, cross-clade, CTL epitope, Asia, HLA-A\*1101
- Abstract** : Objective: To identify and characterize cytotoxic T-cell (CTL) epitopes for HIV-1 clade E using eight known HLA-A\*1101-restricted HIV-1 clade B epitopes. Methods: Induction of clade E-specific CTL was examined by stimulating peripheral blood mononuclear cells (PBMC) from clade E-infected Thai individuals with the clade E-specific peptide corresponding to the clade B epitopes. Cross-clade and clade-specific CTL recognition for these epitopes was analysed using CTL clones and bulk CTL specific for these epitopes. To clarify the presentation of these epitopes in HIV-1-infected T cells, CTL recognition for the clade E-specific and cross-clade epitopes was investigated using CD4CXCR4 cells infected with an HIV-1 clade E clone. Results: Three epitopes, which are identical among clades A-E, were recognized as cross-

clade CTL epitopes in both individuals. Clade B and E sequences corresponding to three epitopes were recognized as clade-specific epitopes in clade B-infected and clade E-infected individuals, respectively. In contrast, clade E-specific peptides corresponding to two other clade B epitopes failed to elicit clade E-specific CTL. CTL specific for the three cross-clade and three clade E-specific epitopes effectively lysed target cells infected with HIV-1 clade E virus. Conclusions: These six epitopes are found to be processed naturally in HIV-1 clade E-infected cells. We show here that a strategy utilizing HIV-1 clade B epitopes is very useful for identifying clade E CTL epitopes.

**No. 265**

- Authors** : Gatei W, Suputtamongkol Y, Waywa D, Ashford RW, Bailey JW, Greensill J, Beeching NJ, Hart CA.
- Title** : Zoonotic species of *Cryptosporidium* are as prevalent as the anthroponotic in HIV-infected patients in Thailand.
- Source** : *Annals of Tropical Medicine and Parasitology*. 96(8):797-802, 2002.
- Keywords** : Chronic Diarrhea, *Parvum*, Identification, Epidemiology, Human, Aids
- Abstract** : The epidemiology of chronic diarrhoea in adults with late-stage HIV infection was investigated in a prospective study in Bangkok, Thailand. During this investigation, 34 *Cryptosporidium* isolates were obtained from the faeces of 36 patients, with mean CD4(+) counts of only  $14 \times 10^6$  CD4(+) cells/litre (range =  $2 \times 10^6$  -  $53 \times 10^6$ /litre), who had symptomatic cryptosporidiosis. Genotyping of these isolates, by RFLP analysis and DNA sequencing of the hypervariable region of the 18S rRNA gene, indicated that only 17 (50%) were of the *C. parvum* human genotype. The rest were of *C. meleagridis* (seven), the *C. parvum* 'bovine' genotype (five), *C. felis* (three) and *C. canis* (two). Extensive genotypic heterogeneity was observed among the *C. parvum* isolates, and two other isolates, one of *C. meleagridis* and the other of *C. felis*, produced atypical restriction patterns and were only identified by sequencing. This appears to represent the first report of *C. canis* and the 'bovine' genotype of *C. parvum* in HIV-infected Thai patients.

**No. 266**

- Authors** : Girlich D, Naas T, Leelaporn A, Poirel L, Fennewald M, Nordmann P.
- Title** : Nosocomial spread of the integron-located *veb-1*-like cassette encoding an extended-spectrum beta-lactamase in *Pseudomonas aeruginosa* in Thailand.
- Source** : *Clinical Infectious Diseases*. 34(5):603-611, 2002.
- Keywords** : Clinical Isolate, Clavulanic Acid, Gene, Resistance.
- Abstract** : The beta-lactamase gene content and epidemiology of ceftazidime-resistant *Pseudomonas aeruginosa* isolates (24% of the total number of *P. aeruginosa* isolates) were investigated at a University Hospital in Thailand during a 4-month period in 1999. Of 33 nonrepetitive clinical isolates, 31 produced a VEB-1-like clavulanic acid-inhibited extended-spectrum beta-lactamase (ESBL). These isolates belonged to different pulsed-field gel electrophoresis types and subtypes. In 1 case, the *bla*(VEB-1)-like gene was plasmid located. The *bla*(VEB-1)-like genes were present as a gene cassette on class 1 integrons that varied in size and structure. In most cases, the *veb-1* cassette was associated with an *arr-2* cassette (rifampin resistance), aminoglycoside resistance gene cassettes, and an *oxa-10*-like cassette encoding a narrow-spectrum oxacillinase-type beta-lactamase. The present study indicates that ESBLs may be endemic in *P. aeruginosa* and illustrates that integrons are efficient means for their spread.

**No. 267**

- Authors** : Hamada T, Wessagowit V, South AP, Ashton GHS, Chan I, Oyama N, Siritattana A, Jewhasuchin P, Charuwichitratana S, Thappa DM, Lenane P, Krafchik B, Kulthanan K, Shimizu H, Kaya TI, Erdal ME, Paradisi M, Paller AS, Seishima M, Hashimoto T, McGrath AA.
- Title** : Extracellular matrix protein 1 gene (ECM1) mutations in lipid proteinosis and genotype-phenotype correlation.
- Source** : Journal of Investigative Dermatology. 120(3):345-350, 2003.
- Keywords** : Genodermatosis, Hyalinosis Cutis Et Mucosae, Alternative Splicing.
- Abstract** : The autosomal recessive disorder lipid proteinosis results from mutations in extracellular matrix protein 1 (ECM1), a glycoprotein expressed in several tissues (including skin) and composed of two alternatively spliced isoforms, ECM1a and ECM1b, the latter lacking exon 7 of this 10-exon gene (ECM1). To date, mutations that either affect ECM1a alone or perturb both ECM1 transcripts have been demonstrated in six cases. However, lipid proteinosis is clinically heterogeneous with affected individuals displaying differing degrees of skin scarring and infiltration, variable signs of hoarseness and respiratory distress, and in some cases neurological abnormalities such as temporal lobe epilepsy. In this study, we sequenced ECM1 in 10 further unrelated patients with lipid proteinosis to extend genotype-phenotype correlation and to add to the mutation database. We identified seven new homozygous nonsense or frameshift mutations: R53X (exon 3); 243delG (exon 4); 507delT (exon 6); 735delTG (exon 7); 785delA (exon 7); 892delC (exon 7) and 1190insC (exon 8), as well as two new compound heterozygous mutations: W160X/F167I (exon 6) and 542insAA/R243X (exons 6/7), none of which were found in controls. The mutation 507delT occurred in two unrelated subjects on different ECM1 haplotypes and may therefore represent a recurrent mutation in lipid proteinosis. Taken with the previously documented mutations in ECM1, this study supports the view that exons 6 and 7 are the most common sites for ECM1 mutations in lipid proteinosis. Clinically, it appears that mutations outside exon 7 are usually associated with a slightly more severe mucocutaneous lipid proteinosis phenotype, but neurological features do not show any specific genotype-phenotype correlation.

**No. 268**

- Authors** : Hui AC, Wu B, Tang AS, Kay R.
- Title** : Lack of clinical utility of the Siriraj Stroke Score.
- Source** : Intern Medical Journal. 32(7):311-4, 2002.
- Keywords** : Acute cerebrovascular disease, Infarct, Haemorrhage, Stroke score.
- Abstract** : **BACKGROUND:** The ability to distinguish between infarct and haemorrhage is essential to the management of acute cerebrovascular disease. In hospitals where emergency neuroimaging is not available, the use of stroke scores has been proposed to distinguish ischaemic from haemorrhagic stroke. **AIMS:** To determine the accuracy of the Siriraj Stroke Score in distinguishing ischaemic from haemorrhagic stroke in a cohort of Chinese patients. **METHODS:** We prospectively assessed and calculated the Siriraj Stroke Score from 253 patients with acute stroke. The sensitivity, specificity, positive and negative predictive values of this score were determined. **RESULTS:** For cerebral haemorrhage, the sensitivity and specificity were both 90% or above, but the positive predictive value was not greater than 70%. For cerebral infarct, the sensitivity and specificity were around 80%, while the positive predictive value exceeded 90%. Analysis by plotting receiver operating characteristic curves failed to find other cut-off points that would improve the performance of the Siriraj Stroke Score. **CONCLUSIONS:** Considering the inconsistent results from this

study and previous studies of the Siriraj Stroke Score, we suggest that scoring systems that only require a small number of variables are unlikely to achieve the level of accuracy needed for clinical decision-making.

**No. 269**

- Authors** : Inthasorn P, Beale P, Dalrymple C, Carter J.  
**Title** : Malignant mixed mullerian tumour of the ovary: Prognostic factor and response of adjuvant platinum-based chemotherapy.  
**Source** : Australian and New Zealand Journal of Obstetrics and Gynaecology. 43(1):61-64, 2003.  
**Keywords** : Adjuvant Chemotherapy, Cytoreduction, Malignant Mixed Mullerian Tumour of The Ovary, Platinum, Prognostic Factors.  
**Abstract** : Objectives: The purpose of the present study was to analyse retrospectively the data of a series of patients presenting to our unit with malignant mixed mullerian tumour (MMMT) of the ovary to identify the prognostic factors and relate them to survival. The role of platinum-based chemotherapy in the adjuvant treatment of this tumour was also evaluated. Methods: All patients diagnosed with MMMT of the ovary from 1987 to 2000 were identified from the gynaecological turnout registry of King George V Hospital, Australia. The effect of clinical and histopathological variables on survival was analysed. The response of platinum-based adjuvant chemotherapy after surgery was also evaluated. Results: Twenty patients with MMMT of the ovary were identified. Of the six patients with measurable disease, two (33%) had complete response after adjuvant platinum-based chemotherapy. The median survival of all patients was 8 months, while that of the patients receiving adjuvant platinum-based chemotherapy was 23 months. Women who were older (>65 years) had a significantly worse survival rate than those who were younger (P = 0.02). The patients with optimal debulking had a better median survival than those with suboptimal debulking, but this difference was not statistically significant (P = 0.21). Sarcomatous component (homologous us heterologous) was not found to be a significant prognostic factor for predicting survival. Conclusions: Malignant mixed mullerian tumour of the ovary is a rare and aggressive gynaecological turnout. The current study indicates that patient age was a significant prognostic factor for survival and surgical cytoreduction combined with platinum-based chemotherapy is the most effective management regimen identified to date to treat MMMT of the ovary.

**No. 270**

- Authors** : Inthasorn P, Carter J, Valmadre S, Beale P, Russell P, Dalrymple C.  
**Title** : Analysis of clinicopathologic factors in malignant mixed Mullerian tumors of the uterine corpus.  
**Source** : International Journal of Gynecological Cancer. 12(4):348-353, 2002.  
**Keywords** : Mixed Mullerian Tumor, Uterine Corpus.  
**Abstract** : The aim of this study was to retrospectively analyze the clinical and pathologic data of a series of patients presenting to our unit with uterine malignant mixed Mullerian tumors (MMMT) to attempt to identify prognostic factors and relate them to survival. Thirty-seven patients diagnosed with MMMT of the uterus from 1988 through 2000 were identified from the gynecological tumor registry. Data was abstracted and analyzed. The effect of a variety of clinical, histopathologic, and surgical variables on recurrence and survival were analyzed by univariate and multivariate analyses. Patients tended to be postmenopausal, overweight, hypertensive, and presented with

abnormal bleeding. Preoperatively 28 (76%) were thought to have clinical stage I-II disease. Nine (32%) were upstaged based on surgical data. Five (56%) of these patients were found to have gross extrauterine disease and four (44%) were found subsequently to have microscopic extrauterine disease. Twenty (54%) patients underwent lymph node dissection and positive nodes were found in seven (35%) patients. Nine patients underwent omentectomy and disease was found in three (33%). Peritoneal washings were positive in three of 16 patients (19%). At the completion of primary surgery, 27 (75%) patients had no residual disease. Twelve (44%) of these patients had recurrence of disease. Median disease-free interval prior to first recurrence was 15 months. Median overall survival was 30 months. Log-rank analysis performed on multiple variables, including stage, age, residual disease, and depth of myometrial invasion showed a statistically significant association with overall survival probability. Only stage remained a significant independent variable predictive of overall survival ( $P = 0.034$ ). We found that stage was an independent prognostic factor for overall survival in patients with uterine MMMT. Age, depth of myometrial invasion, and residual tumor were significant prognostic factors on univariate analysis. These factors may be a guide in order to select a group of high risk patients that may benefit from adjuvant therapy.

**No. 271**

- Authors** : Inthawiwat S, Rattanachaiyanont M, Leerasiri P, Manoch D, Titapant V.  
**Title** : Increasing trend of illicit drug abuse in Thai parturient at Siriraj Hospital.  
**Source** : Journal of the Medical Association of Thailand. 85(10):1081-8, 2002(Oct).  
**Keywords** : Illicit Drug Abuse.  
**Abstract** : **OBJECTIVE:** To report the magnitude of the problem and to evaluate the outcome of maternal illicit drug use in Thai parturients. **DESIGN:** Retrospective case-control study. **SETTING:** Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University. **SUBJECT:** The subjects were 44,640 parturients who had deliveries at Siriraj Hospital from January 1998 to December 2001 and were divided into two groups. The study group consisted of 66 parturients with a history of illicit drug use and the control group consisted of 44,574 parturients without a history of illicit drug use. **INTERVENTION:** Medical records of 66 parturients with a history of illicit drug use were reviewed. Obstetric statistics of the department were retrieved from the computerized database in the Division of Obstetric and Gynecologic Registry. The data were analyzed using descriptive statistics. **MAIN OUTCOME MEASURE:** Characteristics of parturients, pregnancy outcome, type and incidence of illicit drug. **RESULTS:** Within the study period, 66 cases of maternal illicit drug use were identifiable during the intrapartum period; 65 cases used amphetamine or derivatives and 1 case used an opioid derivative. The number had risen from 1 case in 1998 to 58 cases in 2001. Mean age of the patients was 23.30 +/- 6.04 years. Compared to the control group which included 44,574 parturients, the patients had a lower incidence of antenatal care (ANC rate = 21.21% vs 94.35%; RR = 0.23, 95% CI = 0.14-0.26), a higher incidence of HIV infection (10% vs 2%; RR = 6.09, 95% CI = 2.83-13.12), a higher incidence of birth before arrival (BBA rate = 9.09% vs 1.06%; RR = 8.59, 95% CI = 3.98-18.51), and a lower cesarean section rate (10.60% vs 26.36%; RR = 0.40, 95% CI = 0.20-0.81). There were no serious intrapartum, immediate postpartum and neonatal complication. Fetal outcome included a higher incidence of low birth weight infants (22.73% vs 10.23%; RR = 2.22, 95% CI = 1.42-3.46) and a smaller head circumference than the normal range of Thai fetal biometry (31.85 +/- 1.47 cm). **CONCLUSION:** There is an increasing

trend of illicit drug use in Thai parturients. Although the present case series of drug abuse in Thai parturients cannot give the whole picture of maternal drug abuse in the Thai population, the dramatic increase in the identifiable cases during the past 4 years is very alarming. Currently, the outcome of pregnancy in case detected during intrapartum is not much different from that in the general population. However, there are potential risks for the patients and their babies. All medical staffs should be aware of this condition. Careful clinical data gathering and laboratory testing are suggested for prevention of complications and the potential hazards of this problem.

**No. 272**

- Authors** : Issaragrisil S.  
**Title** : Stem cell transplantation for thalassemia.  
**Source** : International Journal of Hematology. 76:307-9 (Suppl.1), 2002(Aug).  
**Keywords** : Bone-Marrow Transplantation, Beta-Thalassemia, Growth.  
**Abstract** : Thalassemia, one of the most common genetic disorders, is considered to be a global problem. Several millions of the patients suffer from severe thalassemic diseases. Stem cell transplantation is currently the only curative therapy. Bone marrow transplantation offers a high probability of cure when performed in young children. There is a higher risk as the patient becomes older, especially the high incidence of graft rejection. Modified conditioning regimens have been developed to overcome graft rejection in patients with class III or full blown manifestations. The alternative use of stem cell from cord blood makes possible earlier transplant with better chance of cure, although the engraftment is slower compared to bone marrow transplantation. More experiences with regard to stem cell transplantation in adult patients, the use of stem cell transplantation from related donors as well as matched unrelated donors are necessary.

**No. 273**

- Authors** : Jamjan L, Maliwan V, Pasunant N, Sirapo-ngam Y, Porthiban L.  
**Title** : Self-Image of Aging: A Method for Health Promotion.  
**Source** : Nursing and Health Sciences. 4(3):6, 2002.  
**Keywords** : Health promotion, Self-perception in old age.  
**Abstract** : In 2020, 15.25% of the Thai population will be over 60. The elderly are those who are considered to be retired and unemployed. Their physical and mental conditions are rapidly changing. They experience many health problems as the result of deteriorating health. Consequently, the health-care team needs to focus on the elderly's perception of health, self-image, and health care provided. Understanding the nature of aging will enhance the elderly's health, such that they will perform self-care and live a more enjoyable life. The aim of this study was to investigate the health perceptions, self-image and methods of health promotion provided to the elderly. Focus discussion groups consisting of participants over 60 years of age, were formed. One hundred and eight participants from four Aging Clubs of large cities were invited to participate. The participants came from Chiang Mai (n = 30), Phitsanulok (n = 21), Siriraj (n = 20), and the 43rd Health Center Aging Club (n = 37), a suburb near Bangkok. Results: The majority of participants perceived that 'Health is composed of a good physical and mental condition' and 'physical strength and happy mind'. All participants identified three things that made them healthy: exercise, good food, and having hobbies. The participants practiced what they believed. Exercise was seen as excellent medicine, and lack of disease was seen as good fortune. Several participants emphasized that having regular check-ups, avoiding smoking, and avoiding drinking alcohol, as being healthy. Few of the elderly,

in a group of > 70-year-olds, from the 43rd Health Center and the Phitsanulok group, mentioned traditional treatment as promoting health. Several participants from Chiang Mai saw fresh air and good ventilation as facilitating health. All participants preferred to meet each other and join in recreational activities at the club for the elderly. Interestingly, the 60–70-year-old age group from the Siriraj.

**No. 274 (104)**

- Authors** : Jiarakongmun P, Alvarez A, Rodesch G, Lasjaunias P.  
**Title** : Clinical course and angioarchitecture of cerebrofacial arteriovenous metamerism syndromes - Three demonstrative cases and literature review.  
**Source** : *Interventional Neuroradiology*. 8(3):251-264, 2002.  
**Keywords** : Wyburn-Mason disease, Bonnet-Dechaume-Blanc, Cerebrofacial Arteriovenous Metameric Syndromes (CAMS), Natural History, Angioarchitecture.  
**Abstract** : Bonnet-Dechaume-Blanc or Wyburn-Mason disease has been considered a rare condition and mysterious disease for the last century. It was recently introduced as a spectrum of disease expression of cerebrofacial vascular structures related by the same neural crest origin, named "Cerebrofacial Arteriovenous Malformations Syndrome" (CAMS) by JJ Bhattacharya. We illustrate the special observations of reported cases in the literature and our three demonstrative cases of CAMS in terms of natural history including progressive appearance of the AVMs, clinical presentation, angioarchitecture, clinical risk of retinal AVMs, AVMs along the optic pathways, intracranial AVMs and proper investigation in the suspicious case.

**No. 275 (105)**

- Authors** : Jiarakongmun P, Chewit P, Pongpech S.  
**Title** : Ruptured anterior spinal artery aneurysm associated with coarctation of aorta - Case report and literature review.  
**Source** : *Interventional Neuroradiology*. 8(3):285-292, 2002.  
**Keywords** : Anterior Spinal Artery Aneurysm, Coarctation Of Aorta And Collateral Circulation, Spinal Subarachnoid Haemorrhage.  
**Abstract** : A 39-year-old man presented with acute headache and neck pain, followed by quadriparesis and quadriparesthesia, accompanied by urinary and bowel incontinence. Lumbar puncture showed subarachnoid haemorrhage. Angiogram via a right axillary approach revealed severe coarctation of the aorta, between the left common carotid artery and left subclavian artery. Multiple collateral circulation including an enlarged anterior spinal arterial axis bridging the stenosed arch provided collateral circulation to the abdominal aorta. A small lobulated aneurysm was seen at the radiculomedullary-anterior spinal artery junction from the right ascending cervical artery. This patient underwent successful surgical clipping of the aneurysm. Pathogenesis of the spinal arterial aneurysm associated with coarctation of the aorta is likely to result from the haemodynamic stress from collateral circulation through the anterior spinal axis rather than segmental arterial disease or angiodysplastic disease. Aneurysms of the spinal artery are rare but can be unusually found in association with SCAVMs, coarctation of aorta, Klippel-Trenaunay syndrome or more rarely with aortic arch interruption.

**No. 276**

- Authors** : Jiranantar V, Rushatamukayanunt W, Lert-akyamanee N, Sirijearanai R, Piromrat I, Suwannanonda P, Muangkasem J.
- Title** : Analgesic effect of intraperitoneal instillation of bupivacaine for postoperative laparoscopic cholecystectomy.
- Source** : Journal of the Medical Association of Thailand. 85:S897-903 (Suppl.3), 2002(Sep).
- Keywords** : Bupivacaine, Postoperative Laparoscopic Cholecystectomy.
- Abstract** : **OBJECTIVE:** To study the effectiveness of intraperitoneal instillation of bupivacaine for postoperative laparoscopic cholecystectomy pain relief, especially specific pain (visceral pain, shoulder pain and epigastric pain). **PATIENTS AND METHOD:** Eighty ASA (American Society of Anesthesiologists) 1 and 2 patients were randomly assigned to receive either 20 ml of 0.5 per cent bupivacaine (n=39) or the same volume of saline (n=41) instilled under direct vision into the hepatodiaphragmatic space, near and above the hepatoduodenal ligament and above the gall bladder bed at the end of surgery. The intensity of visceral pain, shoulder pain and epigastric pain was assessed at 1, 6, 24 and 48 h after surgery using a visual analogue scale (100 mm VAS) and verbal rating "Prince Henry" pain scale (VRS). The time when analgesia was first required and total analgesic consumption were also recorded. t-test, Chi-square, Mann-Whitney U test and Kaplan-Meier survival analysis were used for statistical analysis. **RESULTS:** Patient data were similar in the two groups except for body weight. There were no statistical differences between the two groups for the time when analgesia was first required, VAS, VRS and total analgesic consumption. **CONCLUSION:** In this study, intraperitoneal instillation of bupivacaine does not show any advantage for postoperative analgesia after laparoscopic cholecystectomy.

**No. 277**

- Authors** : Jirapinyo P, Densupsoontorn N, Thamonsiri N, Wongarn R.
- Title** : Prevention of antibiotic-associated diarrhea in infants by probiotics.
- Source** : Journal of the Medical Association of Thailand. 85:S739-42 (Suppl 2), 2002(Aug).
- Keywords** : Antibiotic-Associated Diarrhea, Infants.
- Abstract** : Probiotics administration has been claimed to prevent antibiotic-associated diarrhea. The investigators thus conducted a double blind, placebo controlled study of providing probiotics to infants and children with severe bacterial infections and receiving broad spectrum antibiotics. The results of the study showed that the group receiving probiotics had fewer diarrheal episodes (37.5%) than the control group (80%), although the numbers were too small for statistical analysis. In conclusion, probiotics administration to patients receiving high doses of broad spectrum antibiotics may prevent the occurrence of antibiotic-associated diarrhea. A further study with a larger number is required.

**No. 278**

- Authors** : Kanistanon D, Wongprompitak P, Dharakul T, Songsivilai S.  
**Title** : Hepatitis c virus nonstructural 3 protein: Recombinant NS3 protein of the Thai isolates as an antigen in a diagnostic assay.  
**Source** : Asian Pacific Journal of Allergy and Immunology. 20(3):161-166, 2002.  
**Keywords** : Immunoblot Assay, Hcv Genotypes.  
**Abstract** : Nonstructural 3 (NS3) protein of hepatitis C virus (HCV) is one of the antigens commonly used in diagnostic assays for antibody to hepatitis C virus. However, immune response to the NS3 protein from one genotype may not cross-react with that from other genotypes. In the development of an anti-HCV assay, the NS3 genes from genotypes I and 3 commonly found in Thailand were amplified and cloned into a bacterial expression system. These recombinant NS3 proteins were immunogenic and reacted with plasma samples of Thai patients infected with various HCV genotypes. Interestingly, the NS3 proteins from the Thai genotypes could react with 3 plasma samples from HCV infected Thai blood donors, which could not bind to the NS3.1 protein in the commercial HCV immunoblot kit using antigen from HCV genotype 1. This finding supports our prior observation that the appropriate HCV antigens used in a diagnostic assay should be derived from the virus genotypes commonly found in that geographical region.

**No. 279**

- Authors** : Kankirawatana P, Raksadawan N, Balangkura K.  
**Title** : Vigabatrin therapy in infantile spasms.  
**Source** : Journal of the Medical Association of Thailand. 85:S778-83(Suppl 2), 2002(Aug).  
**Keywords** : Vigabatrin Therapy, Infantile Spasms.  
**Abstract** : **RATIONALE** : To determine the clinical outcome and side effects of vigabatrin (VGB) in the treatment of infantile spasms (IS) and its long-term outcome. **METHOD**:All children with IS treated with vigabatrin were studied. Clinical data regarding age of onset, duration of IS before therapy started, Recurrence of IS, types of seizures that relapse, clinical outcome and side effects were monitored. **RESULTS** : 36 children (17 girls, 19 boys) with IS participated in the study. The mean age of onset of IS was 115.55 +/- 67.3 days old (range, 15 to 300 days). Six were cryptogenic IS and 30 were symptomatic IS. The etiologies of symptomatic IS in this study were tuberous sclerosis, hypoxic ischemic encephalopathy (HIE)/periventricular leukomalacia, porencephaly, partial agenesis of corpus callosum, hemimegalencephaly, cortical dysplasia, and microcephaly. 66.67 per cent (24 of 36) of patients responded to VGB within a mean 2.95 +/- 2.25 days (range, 1 to 7 days). In those who responded to VGB, 3 patients developed recurrent IS within 69.3 +/- 46.7 days (range, 30 to 121 days). Five patients developed epilepsy with different types of seizure during long-term follow-up. The mean duration of subsequent epilepsy after cessation of IS was 16.4 months (range, 5 months to 3 years 10 months). The mean duration of follow-up was 2.74 years (range, 1.09 years to 5.76 years). 10 patients were successfully weaned off VGB after a mean IS free period of 22.5 +/- 5.5 months (range, 12 to 27 months). Transient drowsiness was seen in 4 patients. Three patients had transient abnormal sleep patterns and irritability. Visual field abnormalities were not found but difficult to assess fully in this study. **CONCLUSION**: VGB therapy has a high response rate for the control of IS and is well tolerated in most children. All patients who responded to VGB and were spasm free for more than one year were successfully weaned off VGB therapy. Because serious side effects such as visual field abnormalities are difficult to monitor, the authors propose that VGB could be withdrawn or switched to another AED after a spasm-free period of more than one year.

- No. 280**  
**Authors** : Kankirawatana S, Veerakul G, Sanpakit K, Tanphaichitr VS, Akkabutr P, Suwantol L, Mahasandana C.  
**Title** : Thrombotic complications during induction chemotherapy of acute childhood lymphoblastic leukemia.  
**Source** : Journal of the Medical Association of Thailand. 85:S549-57(Suppl 2), 2002 (Aug).  
**Keywords** : Chemotherapy, Lymphoblastic Leukemia, Superior Vena Cava.  
**Abstract** : The incidence of thrombosis during induction chemotherapy of acute childhood lymphoblastic leukemia (ALL) patients was 6 found to be in 105 (5.7%). There were 4 cerebral infarctions, 1 superior vena cava (SVC) obstruction and 1 deep vein thrombosis. Among these, 2 of them died. A prospective study was further conducted of the change in coagulation and anticoagulation factors during 6 weeks of induction chemotherapy. It was found that the activated partial thromboplastin time (aPTT) was within normal range in all cases throughout 6 weeks, while prothrombin time (PT) and thrombin time (TT) were slightly prolonged, especially during the first 3 weeks of this phase. The natural anticoagulant panels which included protein C (PC), protein S (PS) and antithrombin III (AT III) and also fibrinogen level, were lower during the first 3 weeks and reached its nadir during the second and third week. The lower level of natural anticoagulants might be an important predisposing factor for the occurrence of thrombosis in these patients.
- No. 281**  
**Authors** : Kantakamalakul W, Jaroenpool H, Pattanapanyasat K.  
**Title** : A novel enhanced green fluorescent protein (EGFP)-K562 flow cytometric method for measuring natural killer (NK) cell cytotoxic activity.  
**Source** : Journal of Immunological Methods. 272(1-2):189-197, 2003.  
**Keywords** : Natural Killer Cell, Cytotoxicity Assay, Flow Cytometry, Enhanced Green Fluorescent Protein.  
**Abstract** : Enhanced green fluorescent protein (EGFP) was stably expressed in human erythroleukaemia K562 cells (EGFP-K562) and used as target cells for measurement of natural killer (NK) cell cytotoxicity by flow cytometry. The compromised EGFP-K562 target cells were stained with propidium iodide (PI) and showed dual (green-red) fluorescent. Although the kinetic study demonstrated that the optimal incubation time for the assay was 4 h, a 2-h incubation period also gave comparable results. This new technique correlated strongly with the standard chromium (Cr-51) release assay at the correlation coefficients of 0.87 and 0.89 at p-value <0.001 for 2- and 4-h incubation times, respectively. The EGFP-K562 stable cell line provides a novel method to measure NK cytotoxicity by flow cytometry without pre-staining or pre-labeling target cells.
- No. 282**  
**Authors** : Kantaputra PN, Kinoshita A, Limwonges C, Praditsup O, Niikawa N.  
**Title** : A Thai mother and son with distal symphalangism, hypoplastic carpal bones, microdontia, dental pulp stones, and narrowing of the zygomatic arch: A new distal symphalangism syndrome?  
**Source** : American Journal of Medical Genetics. 109(1):56-60, 2002.  
**Keywords** : Absent Carpal Bone, Dental Pulp Stone, Narrow Zygomatic Arch, Fingernail Dysplasia, Distal Symphalangism, Proximal Symphalangism, Brachydactyly Type B.  
**Abstract** : A Thai mother and son with distal symphalangism and other associated abnormalities are reported. Distal and middle phalanges of fingers and toes 2-5 were either aplastic/ hypoplastic or fused between the corresponding digits. The second fingers and fourth fingernails were most severely affected in both

patients. The mother's hands were less severely affected, the middle and distal phalanges of her hands were malformed and fused. Besides the absence of fusion lines, the shape of the fused middle and distal phalanges was quite different from that of other types of fusion, i.e., fused bones in both patients did not maintain the normal configuration of bone, referring to as "middle-distal phalangeal complex". Distal symphalangism was observed in toes 2-5 of the mother and in toe 3 of the son. Both patients had additional clinical manifestations such as narrowing of the zygomatic arch, dental pulp stone, microdontia of a mandibular permanent central incisor, cone-shaped epiphyses of middle phalanges of fingers, and absence of scaphoid, trapezium, trapezoid, and pisiform bones. Mutation analysis of NOG and ROR2, the genes responsible for proximal symphalangism and brachydactyly type B, respectively, was negative.

**No. 283**

- Authors** : Karnsakul W, Luginbuehl U, Hahn D, Sterchi E, Avery S, Sen P, Swallow D, Nichols B.
- Title** : Disaccharidase activities in dyspeptic children: Biochemical and molecular investigations of maltase-glucoamylase activity.
- Source** : Journal of Pediatric Gastroenterology And Nutrition. 35(4):551-556, 2002.
- Keywords** : Maltase-Glucoamylase, Sucrase-Isomaltase, Lactase-Phlorizin Hydrolase, Multiple Disaccharidase Deficiency.
- Abstract** : Background: Maltase-glucoamylase enzyme plays an important role in starch digestion. Glucoamylase deficiency is reported to cause chronic diarrhea in infants, but its role in dyspeptic children is unknown. Methods: Glucoamylase and other disaccharidase specific activities were assayed from duodenal biopsy specimens in 44 children aged 0.5-18 years (mean, 10 +/- 5 years) undergoing endoscopy to evaluate dyspeptic symptoms. All subjects had normal duodenal histology. Intestinal organ culture was used to evaluate synthesis and processing of maltase-glucoamylase. Sequencing of the maltase-glucoamylase coding region was performed in subjects with low activity or variation of isoform in organ culture. Results: Twenty-two of the dyspeptic children had one or more disaccharidases with low specific activity. Twelve subjects (28%) had low activity of glucoamylase. Eight subjects had low activities of glucoamylase, sucrase, and lactase. Low glucoamylase activity was not correlated with the isoform phenotype of maltase-glucoamylase as described by metabolic labeling and sodium dodecyl sulfate electrophoresis. Novel nucleotide changes were not detected in one subject with low glucoamylase activity or in two subjects with variant isoforms of maltase-glucoamylase peptides. Conclusion: Twelve of 44 dyspeptic children had low specific activity of duodenal maltase-glucoamylase. Eight of these children had low specific activity of all measured disaccharidases.

**No. 284**

- Authors** : Keerasuntonpong A, Sitaposa P, Chaiprasert A, Thamlikitkul V.
- Title** : Efficiency of the glutaraldehyde test strip for monitoring the concentration of glutaraldehyde in reused solutions for disinfecting endoscopes.
- Source** : Journal of the Medical Association of Thailand. 85(11):1164-8, 2002(Nov).
- Keywords** : Glutaraldehyde Test Strip, Glutaraldehyde, Disinfecting Endoscopes.
- Abstract** : BACKGROUND: Glutaraldehyde has been widely used for low-temperature disinfection of endoscopes. The current practice at Siriraj Hospital is to change the glutaraldehyde solution every 21 days or when the solution appears turbid. The disadvantages of this practice include inadequate disinfection of endoscopes if the concentration of glutaraldehyde in a reused solution is insufficient or wasted if the discarded solution is still active. OBJECTIVE: To determine the efficiency

of a glutaraldehyde test strip (GTS) in monitoring the amount of glutaraldehyde in a reused solution for disinfecting endoscopes. **METHOD:** Reused glutaraldehyde solutions for disinfecting bronchoscopes, gastroscopes and colonoscopes were tested for the concentration of glutaraldehyde with a GTS thrice weekly for the first week and then every working day up to 56 days. If the GTS indicated a concentration of glutaraldehyde  $\geq 1.8$  per cent after 21 days, 5 ml of the solution was taken to the laboratory to determine its mycobactericidal activity. **RESULTS:** All samples of the reused glutaraldehyde solution up to 56 days with a concentration of  $\geq 1.8$  per cent glutaraldehyde on GTS from testings showed mycobactericidal activity. If the glutaraldehyde solution was reused for up to 28, 42 or 56 days, it could save 9,603; 22,813 and 29,415 baht per year respectively for the gastroscopy and colonoscopy units. The corresponding figures were -949; 2,726 and 4,564 baht per year for the bronchoscopy unit. It is estimated that up to 400,000 baht per year could be saved by adopting the strategy of GTS monitoring in all endoscopy units at Siriraj Hospital. **CONCLUSION:** The current strategy of discarding reused glutaraldehyde Solution in the gastroscopy, colonoscopy and bronchoscopy units at Siriraj Hospital may be inappropriate since the reused solution is still mycobactericidal for up to 56 days.

**No. 285**

- Authors** : Keerasuntonpong A, Thearawiboon W, Panthawanan A, Judaeng T, Kachintorn K, Jintanotaitavorn D, Suddhisanon L, Waitayapiches S, Tiangrim S, Thamlikitkul V.
- Title** : Incidence of urinary tract infections in patients with short-term indwelling urethral catheters: A comparison between a 3-day urinary drainage bag change and no change regimens.
- Source** : American Journal of Infection Control. 31(1):9-12, 2003.
- Keywords** : Bacteriuria.
- Abstract** : Background: The current practice of caring for hospitalized patients with indwelling urethral catheters in Siriraj Hospital is to change the drainage bag every 3 days. In an extensive medical literature search, no evidence was noted to support this practice. Objective: The purpose of this study was to compare the incidence of catheter-associated urinary tract infections (UTI) in hospitalized patients with indwelling catheters who receive a drainage bag change every 3 days with the incidence of UTI in patients who receive no bag change. Design: This study was a randomized controlled trial. Participants and study procedures: Of the patients at Siriraj Hospital, 153 with an indwelling urinary catheter for at least 3 days were randomized to a 3-day drainage bag change or a no change regimen. A urine sample was obtained from each patient for culture every 7 days, on the day the catheter was removed, or the day the patient was suspected of having a UTI. Results: Of the 153 study patients, 79 were randomized to the 3-day bag change regimen, and 74 patients were in the, no-change group. Both groups were comparable for all baseline characteristics. The incidence of symptomatic UTI was 13.9% in the 3-day drainage bag change group and 10.8% in the no change group ( $P = .7$ ). The incidence of asymptomatic UTI was 36.7% in the 3-day bag change group and 36.5% in the no change group ( $P = .9$ ). Conclusion: There is no evidence for the necessity of a bag change every 3 days at Siriraj Hospital; the urine bag can be left longer than 3 days. However, the appropriate frequency of urinary drainage bag change needs additional study because the sample size in this study does not rule out a false-negative result.

**No. 286 (832)**

**Authors** : Kilmarx PH, Ramjee G, Kitayaporn D, Kunasol P .  
**Title** : Protection of human subjects' rights in HIV-preventive clinical trials in Africa and Asia: experiences and recommendations .  
**Source** : Aids. 15:S73-S79, 2001.  
**Keywords** : Research, Ethics, Informed consent, Counseling, Community, Vaccine, Microbicide

**No. 287**

**Authors** : Kimura M, Yoon HR, Wasant P, Takahashi Y, Yamaguchi S.  
**Title** : A sensitive and simplified method to analyze free fatty acids in children with mitochondrial beta oxidation disorders using gas chromatography mass spectrometry and dried blood spots.  
**Source** : Clinica Chimica Acta. 316(1-2):117-121, 2002.  
**Keywords** : Free Fatty Acid Analysis, Dried Blood Spot, Fatty Acid Beta Oxidation.  
**Abstract** : Background: A precise diagnosis of mitochondrial fatty acid beta-oxidation (FAO) disorders can be difficult as several enzymatic reactions are involved. Methods: Using 5 blood spots on filter paper, each 3 mm in diameter, octanoate, decanoate, cis-4-decenoic acid (C10:1) and cis-5-tetradecenoic acid (C14:1) were measured by one step transmethylation and gas chromatography-mass spectrometry (GC/MS). Results: In subjects with medium-chain acyl-CoA dehydrogenase (MCAD) deficiency C10:1 was increased. C14:1 was increased in very long-chain acyl-CoA dehydrogenase (VLCAD) deficiency, and both were increased in multiple acyl CoA dehydrogenase (MAD) deficiency. Conclusions: Free fatty acids (FFAs) can be measured with a small amount of blood sample if selective ion monitoring (SIM) in CC/MS analysis is used. A single microtube was sufficient throughout the procedure prior to injection onto GC/MS.

**No. 288**

**Authors** : Kolatat T, Aunganon K, Yosthiem P.  
**Title** : Airway complications in neonates who received mechanical ventilation.  
**Source** : Journal of the Medical Association of Thailand. 85:S455-62(Suppl 2), 2002 (Aug).  
**Keywords** : Neonates, Mechanical Ventilation.  
**Abstract** : OBJECTIVE : To determine the incidence, type and severity of airway complications in high risk neonates who received conventional mechanical ventilation. METHOD : Forty-five infants who had received conventional mechanical ventilation in the Neonatal Intensive Care Unit, Department of Pediatrics, Faculty of Medicine Siriraj Hospital for at least 4 days were enrolled. Orotracheal intubation with blue line, non-cuffed, non-shouldered polyvinylchloride tube was used exclusively. The average number of intubations was 2 (range 1-7), and the average duration for intubation was 25 days. The details of the intubation, and the presence of respiratory distress after extubation were recorded. All of the infants had endoscopic examination of the airway within 5 days of extubation. RESULTS: Following extubation, 14 (31.1%) infants developed signs of upper airway obstruction, of which inspiratory dyspnea was the most common manifestation. Only 4 infants developed inspiratory stridor, three of them had a birth weight greater than 2,500 g. Abnormal bronchoscopic findings were found in 42 infants, 68.8 per cent had multiple sites of injury. Supraglottic lesions were found in 55.7 per cent of cases. Laryngomalacia was an associated finding in 8 and gastroesophageal reflux (GER) in 1 occasion. CONCLUSIONS: From the result of this study, the authors found that airway complications related to endotracheal intubation are common among survivors from the

Neonatal Intensive Care Unit. When the diagnosis of airway complications only depends on symptoms and signs of upper airway obstruction, the incidence and extent of injuries may be under-estimated. When attempted extubation fails or when VLBW infants develop increasing respiratory distress that is not clearly explained by an apparent disorder involving the pulmonary parenchyma, flexible bronchoscopic examination should be performed at the bedside with minimal risk.

**No. 289**

- Authors** : Kolatat T, Jarungphan S, Charastong C, Jundeewong Y.  
**Title** : Pulmonary function in infants exposed to pethidine.  
**Source** : Journal of the Medical Association of Thailand. 85:S463-8(Suppl 2), 2002 (Aug).  
**Keywords** : Infants, Pethidine.  
**Abstract** : OBJECTIVE: To investigate the effects of maternal pethidine administration on pulmonary function tests in newborn infants. PATIENTS AND METHOD: The study was carried out in the Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital. The study group consisted of 20 infants exposed to pethidine within 4 hours prior to delivery. Twenty infants whose mothers received no analgesic drug or regional anesthesia were randomly selected as the controls. Narcotic related respiratory depression was determined by Apgar scores, the need for ventilatory support in the delivery room and abnormal pulmonary function measurements. RESULTS: There was no difference in birth weight and gestational age between the two groups of infants. Pethidine was given to mothers at a dose of 72.5 +/- 7.6 mg/kg with a mean drug-delivery interval of 152 +/- 61 minutes. One infant in each group had a 1-minute Apgar score less than 7, but there was no statistical difference in the mean Apgar score between the two groups. None of the infants whose mothers received pethidine required ventilatory support, but oxygen was provided to eight infants who were apparently cyanosed at birth. Pulmonary function measurements were performed at the age of 7.4 +/- 2.3 hours in the controls and 6.0 +/- 2.5 hours in the study group. There was no significant difference in respiratory rate, tidal volume, inspiratory time, functional residual capacity, compliance and resistance between the two groups of infants. CONCLUSION: Severe narcotic related respiratory depression was uncommon in this study. In the first 12 hours of life, there was no significant difference in pulmonary function of the infants exposed to pethidine. It is quite safe to allow the baby to room-in with the mother if respiratory depression is not presented at birth.

**No. 290**

- Authors** : Kongsayreepong S, Chaibundit C, Chadpaibool J, Komoltri C, Suraseranivongse S, Suwannaononda P, Raksamanee E, Noocharoen P, Silapadech A, Parakkamodom S, Pum-In C, Sojeoyya L.  
**Title** : Predictor of core hypothermia and the surgical intensive care unit.  
**Source** : Anesthesia and Analgesia. 96 (3):826-833, 2003.  
**Keywords** : Mild perioperative hypothermia, Temperature, Randomized clinical-trial, Normothermia, Intraoperative hypothermia, Responses, Surgery, General-anesthesia, Management, Analgesia.  
**Abstract** : Inadvertent postoperative core hypothermia is associated with multiple physiological effects, especially in patients admitted to the intensive care unit (ICU). Despite previous reports of the relationship between patient, surgical, and anesthetic factors and immediate postoperative core hypothermia, this information might need to be reconsidered in the light of progress in surgery, anesthetic, and warming techniques. We designed this prospective study of

194 postgeneral surgical patients to assess the incidence, predictive factors, and outcome of core hypothermia (tympanic membrane core temperature [T<sub>c</sub>] <36.0degreesC) at the time of admission to the general ICU in a large tertiary university medical center from December 2000 to March 2001. The following variables were studied: age, sex, body weight, body surface area, preoperative body temperature, ASA physical status, history of diabetic neuropathy, emergency surgery, surgical subspecialty performing surgery, type of surgery, type of anesthesia (general, regional, or combined epidural and general), temperature monitoring, use of a forced air warming technique, amount of fluid and blood replacement, duration of anesthesia, duration of surgery, and the ambient operating room temperature. Other outcomes, i.e., length of ICU stay and mortality, were also assessed. The incidence of core hypothermia was 57.1%, 41.3%, and 28.3% according to the definition of T<sub>c</sub> <36.0degreesC, <35.5degreesC, and <35.0degreesC, respectively. Multiple logistic regression showed the following risk factors for core hypothermia: high ASA physical status (odds ratio, 2.87; 95% confidence interval [CI], 0.82-10.03 for ASA II; odds ratio, 8.35; 95% CI, 1.67-41.88 for ASA >II), magnitude of surgical procedure (odds ratio, 6.60; 95% CI, 1.66-26.19 for medium surgery; odds ratio, 22.23; 95% CI, 5.41-91.36 for major surgery), use of combined epidural and general anesthesia (odds ratio, 3.39; 95% CI, 1.05-10.88), and duration of surgery >2 h (odds ratio, 4.50; 95% CI, 1.48-13.68). Not using temperature monitoring seems to be a risk factor as well (odds ratio, 3.00; 95% CI, 0.87-10.12). Significant protective factors against core hypothermia were heavier body weight (odds ratio, 0.94; 95% CI, 0.89-0.98), higher preoperative body temperature (odds ratio, 0.31; 95% CI, 0.150.65), and warmer ambient operating room temperature (odds ratio, 0.67; 95% CI, 0.51-0.88). In conclusion, the incidence of core hypothermia (T<sub>c</sub> <36.0degreesC) at the time of admission to the general ICU is still frequent. To reduce the incidence, more efforts and concern should be taken to prevent core hypothermia, especially in the patient with high ASA physical status, undergoing more intensive and lengthy surgery, and using combined epidural and general anesthesia.

**No. 291**

- Authors** : Kongsayreepong S, Gunnaleka P, Suraseranivongse S, Pirayavaraporn S, Chowvanayotin S, Montapaneewat T, Manon C.
- Title** : A reusable, custom-made warming blanket prevents core hypothermia during major neonatal surgery.
- Source** : Canadian Journal of Anaesthesia. 49(6):605-9, 2002(Jun-Jul).
- Keywords** : Core Hypothermia, Neonatal Surgery.
- Abstract** : PURPOSE: To introduce a reusable model of neonatal forced air warming blanket for intraoperative use during major noncardiac neonatal surgery and to determine clinical efficacy of this reusable blanket compared with the commonly used disposable blankets. METHODS: Delivered air temperature and calorie uptake of standard thermal bodies within the reusable blankets, Bair Hugger(R) blanket model 530 and model 555 were studied. Also, an efficacy study was conducted in 90 neonatal patients scheduled for major noncardiac surgery comparing the reusable blanket, the Bair Hugger(R) blanket model 530 and passive heat conservation as a control. The covered reusable blanket was used as a rescue procedure if the core temperature was < 35.5 degrees C. RESULTS: Delivered air temperature and heat transfer from the covered reusable blanket did not differ significantly from those of the Bair Hugger(R) blanket model 530 and model 555 (despite 0.75 degrees C-1.2 degrees C of heat trapped under the sheet and 1.3 Kcal less energy transfer). Temperatures measured underneath

patients (correlated to poorly perfused areas) were highest using the Bair Hugger(R) blanket model 555. The reusable blanket was efficacious in preventing intraoperative core hypothermia and not different from the Bair Hugger(R) blanket model 530. About 1/3 of the patients in the control group had presented a core temperature < 35.5 degrees C but were successfully rescued using the reusable blanket. No adverse events were associated with any of these warming methods. CONCLUSION: This study shows the clinical efficacy of our reusable blanket for the prevention of core hypothermia during major neonatal surgery, which is not different from commonly used disposable blankets.

**No. 292 (650)**

- Authors** : Korbrisate S, Dumnin S, Chawengkirttikul R, Gherunpong V, Eampokalap B, Gongviseisoog C, Janyapoon K, Lertpocasombat K, Shimada T
- Title** : Distribution of *Aeromonas hydrophila* serogroups in different clinical samples and the development of polyclonal antibodies for rapid identification of the genus *Aeromonas* by direct agglutination.
- Source** : Microbiology and Immunology. 46(12):875-879, 2002.
- Keywords** : *Aeromonas hydrophila*, O-serogroup, agglutination test, polyclonal antibodies.
- Abstract** : We characterized a collection of 256 *Aeromonas hydrophila* strains isolated from blood, discharge and stool for their serogroup designation. Of these, 2.3% were untypable and 15.2% were rough strains. Among the typable strains, about 50% comprised serogroups O:11, O:16, O:18, O:34 and O:83. To develop rapid differentiation of *Aeromonas* from other oxidase-positive bacteria, antisera against *Aeromonas* were produced to establish a direct, genus-specific, agglutination test. It was found that among 105 isolates of *Aeromonas*, 102 showed positive results with the agglutination test. The calculated sensitivity and specificity were 97.1% and 90.7%, respectively.

**No. 293**

- Authors** : Kosrirukvongs P, Visitsunthorn N, Vichyanond P, Bunnag C.
- Title** : Allergic conjunctivitis.
- Source** : Asian Pacific Journal of Allergy and Immunology. 19(4):237-244, 2001(Dec).
- Keywords** : Limbal vernal keratoconjunctivitis
- Abstract** : The purpose of this research is to study the clinical features and risk factors of various types of allergic conjunctivitis. Four hundred and forty-five patients with a history of itching, foreign body sensation, lacrimation and red eyes were examined, and a skin test was performed and assessed to grade the severity. The mean age of the subjects was 24.5 +/- 16.3 years with female preponderance, except for vernal keratoconjunctivitis. The majority of the patients had perennial allergic conjunctivitis. Ninety-five percent of the patients had associated allergic diseases, especially allergic rhinitis. Sixty-six percent of the patients had a family history of atopy. Most patients had symptoms at night. Symptoms persisted throughout the year and were generally triggered by exposure to house dust. The allergy skin tests to common aero-allergens were positive in 95% of patients tested. Common allergens causing sensitization were house-dust mites, house dust, cockroaches, and grass pollen. Environmental control and avoidance of these allergens should be stressed in the management of these conditions.

**No. 294**

- Authors** : Kosuwon P, Wasi C, Sutra S, Kositanont U, Hutagalung Y, Bock HL  
**Title** : Flexibility in the administration schedule of varicella vaccination in healthy adolescents and young adults.  
**Source** : Asian Pacific Journal of Allergy and Immunology. 20(4):241-245, 2002.  
**Keywords** : Clinical-trials, Children, Complications, Epidemiology, Zoster.  
**Abstract** : A clinical trial to assess the immunogenicity and reactogenicity of two doses of varicella vaccine (live attenuated Oka-strain, GlaxoSmithKline Biologicals), when either given 8 or 4 weeks apart in healthy seronegative adolescents and young adults, was conducted in Khon Kaen and Bangkok, Thailand. Contrary to seroconversion rates generally reported for this age group, in our study all subjects were already seropositive after the first vaccine dose. After the first vaccine dose, geometric mean titers (GMTs) for anti-varicella antibodies were 78.4 (median 64) for the adolescent group and 136.5 (median 128) for the young adult group. Six weeks after administration of the second dose, anti-varicella GMTs reached 331.7 (median 256) and 636.9 (median 512) for the adolescent and young adult groups, respectively, with a 4.2-4.7-fold increase from pre-vaccination titers. The difference in GMTs between post-dose I and dose II was statistically significant for each group. The reactogenicity after the first and second doses of vaccination was low: no varicella rash was seen, in either the shorter or longer schedule. GlaxoSmithKline Biologicals varicella vaccine (Varilix(TM)) offered a high flexibility, administration possible at either 4 or 8 weeks interval, whilst eliciting good immunogenicity and good tolerability.

**No. 295**

- Authors** : Krittayaphong R, Bhuripanyo K, Punlee K, Kangkagate C, Chaithiraphan S.  
**Title** : Effect of atenolol on symptomatic ventricular arrhythmia without structural heart disease: a randomized placebo-controlled study.  
**Source** : Am Heart Journal. 144(6):e10, 2002(Dec).  
**Keywords** : Heart, Randomized Placebo-Controlled.  
**Abstract** : BACKGROUND: Ventricular arrhythmia (VA) from the right ventricular outflow tract (RVOT) is a common problem. Symptomatic patients are usually treated with beta-blockers. There is little data on the systematic evaluation of the efficacy of beta-blocker. We determine the efficacy of atenolol in the treatment of symptomatic VA from RVOT compared with placebo. METHODS AND RESULTS: This was a randomized, double-blinded, placebo-controlled study. We prospectively studied 52 consecutive patients with symptomatic VA. Severity of symptoms, 24-hour ambulatory monitoring (AECG) and quality of life (QOL) were assessed at baseline and 1 month after atenolol. Exercise testing was performed at baseline. Average premature ventricular complex (PVC) count at baseline was 21,407 +/- 1740 beats per 24 hours, and 19% had ventricular tachycardia as measured by AECG. Results of this study showed that atenolol significantly decreased symptom frequency (P =.03), PVC count (P =.001) and average heart rate (P <.001) measured by AECG, whereas placebo significantly decreased symptom frequency (P =.002) but had no effect on PVC count (P =.78) or average heart rate (P =.44). Neither atenolol nor placebo had an effect on QOL. CONCLUSIONS: Atenolol improves symptoms and decreases PVC count from ambulatory monitoring. Placebo improved symptoms to the same extent as atenolol but had no effect on severity of VA. This might be the so-called placebo effect, which is a concern when treating patients or doing research on the effects of a drug.

**No. 296**

- Authors** : Krittayaphong R, Chotinaiwatarakul C.  
**Title** : Exercise induced ST elevation and T wave alternans associated with critical disease of left anterior descending coronary artery.  
**Source** : Heart. 88(4):438, 2002.  
**Keywords** : Exercise, ST elevation, T wave.

**No. 297**

- Authors** : Krittayaphong R, Sriratanasathavorn C, Bhuripanyo K, Raungratanaamporn O, Soongsawang J, Khaosa-ard B, Kangkagate C.  
**Title** : One-year outcome after radiofrequency catheter ablation of symptomatic ventricular arrhythmia from right ventricular outflow tract.  
**Source** : American Journal of Cardiology. 89 (11):1269-1274, 2002.  
**Keywords** : Term follow-up, Overt heart-disease, Tachycardia, Ectopy.  
**Abstract** : Although ventricular premature complexes (VPCs) in patients without structural heart disease are benign, many patients experience disabling symptoms. Many patients need long-term medication, which is often ineffective and may have adverse effects. Radiofrequency catheter ablation (RFCA) may be an alternative treatment. RFCA was performed in 33 patients with severely symptomatic VPCs that were refractory to medication. Mean VPCs were 23,987 +/- 2,077 beats/24 hours. Twenty-four-hour ambulatory electrocardiographic monitoring, quality of life, and symptoms were assessed at a screening visit and 1 and 12 months after RFCA. RFCA was successfully performed in 32 patients (97%). This resulted in a significant improvement in symptoms, severity of ventricular arrhythmia, and quality of life at 1 and 12 months after the procedure. There were no major complications related to the procedure. Eight patients (24%) had residual arrhythmia. Five of them underwent repeated ablation with successful results. Thus, catheter ablation is a safe and effective treatment for symptomatic ventricular arrhythmia from the right ventricular outflow tract. It also improves the quality of life. Catheter ablation is a viable alternative to drugs in the presence of disabling symptoms.

**No. 298**

- Authors** : Krittayaphong R, Veerakul G, Bhuripanyo K, Jirasirojanakorn K, Nademanee K  
**Title** : Heart rate variability in patients with sudden unexpected cardiac arrest in Thailand.  
**Source** : American Journal of Cardiology. 91(1):77, 2003.  
**Keywords** : Unexplained-Death-Syndrome, Brugada-Syndrome, Men.  
**Abstract** : We studied heart rate Variability in 26 patients with sudden unexpected death syndrome (SUDS) and 42 controls to determine whether there were changes in autonomic modulation in patients with SUDS. Results of this study showed that patients with SUDS had higher heart rates at night, lower day to night heart rate differences, and decreases in time- and frequency-domain heart rate variability, especially at night, which may explain the occurrence of ventricular fibrillation episodes at night in these patients.

**No. 299**

- Authors** : Kulthanan K, Jiamton S, Omcharoen V, Linpiyawon R, Ruangpeerakul J, Sivayathorn A.
- Title** : Autoimmune and rheumatic manifestations and antinuclear antibody study in HIV-infected Thai patients.
- Source** : International Journal of Dermatology. 41(7):417-22, 2002(Jul).
- Keywords** : Autoimmune, Rheumatic Manifestations, Antinuclear Antibody, HIV, CD4 lymphocyte.
- Abstract** : **BACKGROUND:** There have been reports concerning an association between human immunodeficiency virus (HIV) infection and autoimmune and rheumatic diseases. **OBJECTIVE:** The purpose of this study was to examine autoimmune and rheumatic manifestations in HIV-infected patients and their correlation with antinuclear antibody (ANA) tests. **METHODS:** The clinical and laboratory results of HIV-infected patients attending the Department of Dermatology, Siriraj Hospital, Bangkok, Thailand, from February 1999 to January 2000, were analyzed. Laboratory studies included serum CD4 lymphocyte count and ANA tests. **RESULTS:** Sixty-two patients were enrolled prospectively in the study. Myalgia was the most common clinical presentation (50%). Others included photo sensitivity (on history) (39%), arthralgia (26%), vasculitis (18%), sicca complex (10%), arthritis (7%), and Reiter's syndrome (2%). A history of hair loss was given by 23% of patients. A positive ANA test was detected in 3%. No cases of systemic lupus erythematosus, scleroderma, or dermatomyositis were seen. **CONCLUSIONS:** Autoimmune and rheumatic manifestations were not uncommonly detected in patients with HIV infection. HIV infection may sometimes mimic systemic lupus erythematosus clinically.

**No. 300**

- Authors** : Kulthanan K, Tiprungskorn P, Linpiyawon R.
- Title** : Cutaneous reaction to oral antihistamine.
- Source** : Clinical and Experimental Dermatology. 28(2):229-230, 2003
- Keywords** : Oral antihistamine.

**No. 301**

- Authors** : Kunathikom S, Rattanachaiyanont M, Makemaharn O.
- Title** : Analysis of aneuploidy in mini-Percoll gradient centrifuged human sperm for intracytoplasmic sperm injection (ICSI) using fluorescence in situ hybridization.
- Source** : Journal of Obstetrics and Gynaecology Research. 28(4):224-230, 2002.
- Keywords** : Aneuploidy, Fish, Icsi, Male Infertility.
- Abstract** : **Aim:** To study the aneuploidy rates of chromosomes 13,18, 21, X and Y in Percoll gradient centrifuged sperm from infertile patients with male infertility factor treated by intracytoplasmic sperm injection (ICSI) compared with healthy fertile donors and infertile patients with normal semen parameters. **Methods:** This case-controlled study was conducted in a university hospital. Semen samples were obtained from three healthy fertile donors, eight infertile patients with normal semen parameters, and 18 infertile patients with male infertility factor. All samples were subjected to mini-Percoll gradient centrifugation before being processed through fluorescent in situ hybridization. The incidences of aneuploidy were compared using Chi-squared test. **Results and Conclusions:** A total of 64949 spermatozoa were analyzed. The disomy rates for chromosomes 13,18, 21, and X or Y of sperm from patients with male infertility factor were 0.21%, 0.37%, 0.36% and 0.63%, respectively, whereas the diploidy rate was 0.17-0.23%. These incidences

were higher than those from men with normal semen parameters. The result suggested that the embryos of patients with male infertility factor treated by ICSI are at increased risk of chromosome abnormalities.

**No. 302 (549)**

**Authors** : Kungskulniti K, Charoenca N, Vichyanond P, Kongpanichakul A, Poomrattanak P, Siriprasert K.  
**Title** : Allergic diseases in school children and association with PM10 and other environmental factors.  
**Source** : Epidemiology. 13(4):863, 2002.  
**Keywords** : Allergy, Children, Environmental Factors.

**No. 303**

**Authors** : Kuptniratsaikul V, Chulakadabba S, Ratanavijitrasil S.  
**Title** : An instrument for assessment of depression among spinal cord injury patients: comparison between the CES-D and TDI.  
**Source** : Journal of the Medical Association of Thailand. 85(9):978-83, 2002(Sep).  
**Keywords** : Spinal Cord Injury, CES-D, TDI.  
**Abstract** : **OBJECTIVE:** To search for a simple, practical and appropriate instrument for the assessment of depression among Thai SCI patients: comparison between two self-rating instruments. **MATERIAL AND METHOD:** Eighty-three SCI patients were asked to complete a questionnaire composed of the Thai depression inventory (TDI) and the Center for Epidemiological Studies Depression Scale (CES-D), Thai version. All subjects were interviewed by a psychiatrist and were diagnosed according to the categories of depression of the Diagnostic and Statistical Manual of Mental fourth edition, (DSM-IV). **STATISTICS:** Receiver Operating Characteristic (ROC) curve and Logistic regression analysis. **RESULTS:** Twenty patients were confirmed to have a depressed mood or adjustment disorder. The area under the ROC curve for the CES-D and TDI was 0.826 and 0.827. The sensitivities and specificities of the CES-D and TDI were 80.0, 69.8 per cent and 70.0, 79.4 per cent respectively. The positive predictive value and negative predictive value of the two tests were 45.7, 91.7 per cent and 51.9, 89.3 per cent. Using Logistic regression analysis, the CES-D produces a better model than the TDI (Chi-square value = 23.196 and 4.578). **CONCLUSION:** The CES-D is more appropriate for screening for depression in SCI patients than the TDI.

**No. 304**

**Authors** : Kuptniratsaikul V, Smerasuta O, Klomjaiyen P.  
**Title** : The perceived handicap questionnaire: a self perceived handicap measurement in patients with spinal cord injury.  
**Source** : Journal of the Medical Association of Thailand. 85(8):935-9, 2002(Aug).  
**Keywords** : Perceived Handicap Questionnaire, Spinal Cord Injury.  
**Abstract** : Handicap exists when individuals with impairment or disability are unable to fulfill one or more of the roles that are considered normal for their age, gender, and culture. In fact, handicap is one of the most poorly measured of all rehabilitation outcomes. This study was performed to measure the subjective experience of handicap in spinal cord injury (SCI) patients who had permanent disabilities and were often faced with environmental barriers. Eighty-three new traumatic SCI patients with a mean age of 33 years were interviewed during follow-up outpatient clinic visits using the Perceived Handicap Questionnaire (PHQ). This test provides a global measurement of the extent of self-perceived handicap

across five dimensions based on the WHO's classification of handicap. When compared with normal persons, SCI subjects perceived themselves as more handicapped in all dimensions especially mobility and physical independence. In contrast, the majority of SCI subjects perceived themselves as less handicapped than others with SCI in physical independence, and equally handicapped in social integration and in economic self-sufficiency. In addition, the Barthel Index Score of self-care activities was negatively correlated with the PHQ score, but the depression score and hospitalization period were positively correlated with the PHQ score. Rehabilitation professionals should pay attention to the measurement of societal functioning or handicap in addition to disability.

**No. 305**

- Authors** : Kuptniratsaikul V, Tosayanonda O, Nilganuwong S, Thamalikitkul V.  
**Title** : The efficacy of a muscle exercise program to improve functional performance of the knee in patients with osteoarthritis.  
**Source** : Journal of the Medical Association of Thailand. 85(1):33-40, 2002(Jan).  
**Keywords** : Muscle Exercise Program, Knee, Osteoarthritis.  
**Abstract** : Osteoarthritis (OA) is a common chronic and progressive degenerative joint condition. A major consequence of knee OA is physical disability; especially difficulty with activities requiring ambulation and transfer, which are necessary to maintain independence and a good quality of life. The purposes of this study were to determine the efficacy of a muscle exercise program along with education about knee care, and investigate the clinical factors which influence its therapeutic efficacy. A prospective study was carried out among elderly Thai people aged 60 years and over, living in an urban community of the Bangkok metropolitan area around Siriraj Hospital, between October 1997 and September 1999. The number of elderly people with osteoarthritis of the knee was 392 (male:female=86:306) with a mean age of 67.7+/-6 years. They were interviewed for demographic data and information about their symptoms. The range of the knee movement, quadriceps strength and the six-minute walking distance and a knee X-ray were evaluated. Group exercise was arranged twice a week for 8 weeks for the intervention group only. The results of the study revealed that the quadriceps strength in the intervention group had a tendency to increase and the walking distance was significantly improved especially in the first two months but there was a tendency to decline by the sixth and twelfth month after enrollment. On the other hand, there was no statistically significant difference of both important outcomes for the control group when assessed in the second month. The findings at the sixth and twelfth month after enrollment were that the quadriceps strength was slightly increased but the walking distance was decreased when compared with the initial assessment. An exercise frequency of 12 sessions in two months was sufficient to improve muscle strength and walking distance. Group exercise produces a significant improvement in strength and walking ability, especially in the first two months. Deterioration over time could be due to multiple factors, such as lack of regular exercise, lack of motivation, lack of family support or poor economic status, so we should encourage the elderly to exercise regularly.

**No. 306**

- Authors** : Kuptniratsaikul V. Tosayanonda O. Nilganuwong S. Thamalikitkul V.  
**Title** : The epidemiology of osteoarthritis of the knee in elderly patients living an urban area of Bangkok.  
**Source** : Journal of the Medical Association of Thailand. 85(2):154-61, 2002(Feb).  
**Keywords** : Osteoarthritis, Knee, Elderly.  
**Abstract** : An epidemiological study of 392 elderly Thai patients with osteoarthritis (OA) of the knee, 86 males and 306 females, with a mean age of 67.8 years, was performed. The prevalence of knee OA was 34.5-45.6 per cent. Most of the patients had completed primary education and had sufficient income. More than half of the patients had pain in both knees, but many of the elderly people used neither knee supports nor walking aids (82.7 and 90.6%). Sixty-four per cent had no previous knowledge concerning the value of exercise. Sixty-five per cent of the patients had never used any pain medication. Three-fourths of the subjects evaluated themselves to have fair to good health. Sixty per cent presented with knee pain when climbing the stairs, and 64.8 per cent had a fair quality of life. Almost all the subjects had mild to moderately severe grade of OA and their X-ray findings were level II-III. The average quadriceps strength and six-minute walking distance were 12.95 +/- 5.51 kilograms and 363.69 +/- 99.34 meters respectively. The five factors that significantly correlated with walking ability were age, sex, the functional incapacity score, using walking aids and level of severity found on X-ray. Previous knowledge about knee exercise did not affect walking ability, but may have been due to the irregularity of the exercise schedule they performed. The elderly should be encouraged to exercise regularly in addition to receive knowledge about proper exercise.

**No. 307**

- Authors** : Laohapansang M, Phanchaipetch T, Kongsayreepong S, Ungkanont K.  
**Title** : Slide tracheoplasty for severe congenital long segment tracheal stenosis in infants: surgical and anesthetic management.  
**Source** : Journal of the Medical Association of Thailand. 85:S1031-9(Suppl.3), 2002(Sep).  
**Keywords** : Slide Tracheoplasty, Severe Congenital, Infants, Anesthetic.  
**Abstract** : Congenital long segment tracheal stenosis is the rare occurrence of an intrinsic narrowing of the trachea due to a complete cartilagenous ring. It is difficult to manage and can be life threatening especially when these patients who are usually neonates or infants have the pathological pattern of a long segment and have to come for surgical correction. Despite many technical reports on how to correct this anomaly, currently, the technique of "slide tracheoplasty" is claimed to be the most successful with the good immediate and long-term outcomes. But because of the rare and life threatening disease, so we were encouraged and write this report about the disease and its management. These are the case series reports of 4 infants with a history and diagnosis of severe long segment congenital tracheal stenosis who needed a definite surgical repair. The authors decided to use the surgical technique of "slide tracheoplasty" with successful outcome. In two of the cases, patients needed cardioplumony bypass support during the surgical repair. All of these patients did well after the operation except one patient with a history of congenital heart disease (tetralogy of Fallot) who needed an emergency surgical repair and was reoperated upon with pericardial patch. In this reports the authors did not find any benefit from tracheostomy. Also, details of surgical and anesthetic procedure were discussed with the conclusion that the surgical technique of slide tracheoplasty should be the surgical of choice for the management of congenital long segment tracheal stenosis.

**No. 308**

- Authors** : Laohaprasitiporn D, Nana A, Soongswang J, Durongpisitkul K, Kangkagate C, Rochanasiri W, Pooranawattanakul S.
- Title** : Transcatheter coil occlusion of small patent ductus arteriosus: experience at Siriraj Hospital.
- Source** : Journal of the Medical Association of Thailand. 85:S630-9(Suppl 2), 2002(Aug).
- Keywords** : Arteriosus, Transcatheter Coil Occlusion.
- Abstract** : Transcatheter coil occlusion of small-to-moderate-size patent ductus arteriosus (PDA, < 3.5 mm) is well established as a procedure of first choice in many institutions. Its much lower cost compared with surgical ligation or other devices makes it an attractive option, especially in Thailand. **PATIENTS AND METHOD:** Between September 1995 and June 2000, all patients diagnosed with PDA with audible murmur and echo-Doppler confirmation of diameter less than 3.5 mm were scheduled for transcatheter coil occlusion at the Department of Pediatrics, Faculty of Medicine Siriraj Hospital. The hemodynamic studies were obtained both pre and post occlusion. The immediate and late outcome, including complication were assessed. **RESULTS:** A total of 77 cases, 78 procedures of transcatheter PDA coil occlusion were performed. Seventy cases (90.9%), comprised of 19 males (27.1%) and 51 females (72.9%) were successfully deployed with coils. The remainder were unsuccessfully deployed and later referred to surgery. The median age of the successful group was 6 years and 6 months and median weight was 16.5 kg. Twenty cases (28.6%) had other associated intra and extracardiac anomalies. All patients were asymptomatic, except one case having bronchopulmonary dysplasia (BPD) from prolonged ventilation. Single-coil occlusions were performed in 74.3 per cent and double-coil occlusions in 25.7 per cent. Conventional 0.038-inch Gianturco coils were deployed in 86.5 per cent. The mean procedure time was 78.1 +/- 35.1 minutes. The mean fluoroscopic time was 20.2 +/- 15.6 minutes. The total complete occlusion rate was 87.7 per cent. Tiny residual flow of PDA was demonstrated by follow-up echocardiogram in 12.3 per cent. Seven per cent of the patients were lost to follow-up. There was no significant difference in PDA size and hemodynamics between the groups of patients with complete occlusion and having residual shunt. Minor complications occurred in 12.9 per cent, including mild left pulmonary artery stenosis (10%), coil embolization to distal pulmonary artery (8.6%), slippage of catheter with coil (2.9%) and decreased dorsalis pedis pulse (1.4%). One late death was found in a BPD patient from pneumonia 2 months after the procedure. **CONCLUSION:** Transcatheter coil occlusion of PDA is as effective, feasible, safe and less costly than surgical ligation. With improvement in technique and device selection and appropriate case selection, there should be an increase rate of complete occlusion and a decrease in complications.

**No. 309**

- Authors** : Leowattana W.
- Title** : Chronic infections and atherosclerosis.
- Source** : Journal of the Medical Association of Thailand. 84:S650-7(Suppl.3), 2001(Dec).
- Keywords** : Coronary heart disease, Atherosclerosis, Chronic infections, Cytomegalovirus.
- Abstract** : The established risk factors for atherosclerosis such as hypertension, smoking, diabetes mellitus, hyperlipidemia, and hyperhomocysteinemia do not explain clinical and epidemiological features of coronary heart disease (CHD). The role of infectious disease as a CHD risk factor may partly explain these features. Chronic infection with various microorganisms, particularly, Chlamydia pneumoniae, Cytomegalovirus (CMV) and Helicobacter pylori may play a role in etiological factors, linking inflammation and atherogenesis. Results

from epidemiological studies, pathology of atherosclerotic plaques, animal studies, molecular biology and clinical antibiotic trials indicated a positive association between *C. pneumoniae* infection and CHD. Chronic infection might also influence preexisting plaque by enhancing T cell activation, which participate in destabilization of intimal cap. However, the exact nature of pathophysiological link between the organisms and CHD remains to be elucidated. Future antibiotic interventional studies may help to further clarify the role of chronic infection and inflammation in CHD.

**No. 310**

- Authors** : Leowattana W.  
**Title** : DHEA(S): the fountain of youth.  
**Source** : Journal of the Medical Association of Thailand. 84(Suppl.2):S605-12, 2001(Oct).  
**Keywords** : Dehydroepiandrosterone,  
**Abstract** : Dehydroepiandrosterone (DHEA) and its sulfate ester (DHEAS) are weak androgens produced primarily by the adrenal gland. Although their plasma concentrations by far exceed those of any other adrenal product, their physiological roles have not yet been determined. In plasma, where the major portion of these hormones is present in the sulfate form, it is possible that DHEAS serves as a reservoir for DHEA. Since various tissues have been shown to contain steroid sulfatases. The peak plasma levels of DHEA and DHEAS occur at approximately age 25 years, decrease progressively thereafter, and diminish by 95 per cent around the age of 85 years. The decline of DHEAS concentrations with aging has led to the suggestion that DHEAS could play a role in itself and be implicated in longevity. Moreover, the epidemiological evidence has shown that adult men with high plasma DHEAS levels are less likely to die of cardiovascular disease. DHEA has also been shown to increase the body's ability to transform food into energy and burn off excess fat. Another recent finding involves the anti-inflammatory properties of DHEA. It has been known that DHEA can lower the levels of interleukin-6 (IL-6) and tumor necrosis factor alpha (TNF-alpha). It should be pointed out that chronic inflammation is known to play a critical role in the development of the killer diseases of aging: heart disease, Alzheimer's disease and certain types of cancer. In conclusion, DHEA or DHEAS administration combined with conventional treatment may be implicated in particular conditions to improve the quality of life.

**No. 311**

- Authors** : Leowattana W, Bhuripanyo K, Singhaviranon L, Akaniroj S, Mahanonda N, Samranthin M, Pokum S.  
**Title** : Roxithromycin in prevention of acute coronary syndrome associated with *Chlamydia pneumoniae* infection: a randomized placebo controlled trial.  
**Source** : Journal of the Medical Association of Thailand. 84:S669-75(Suppl.3), 2001(Dec).  
**Keywords** : Acute coronary syndrome, *Chlamydia pneumoniae*  
**Abstract** : The role of *Chlamydia pneumoniae* infection in precipitating acute coronary syndrome (ACS) is unclear. Some studies have indicated that intervention with macrolide antibiotics might reduce coronary events in patients with ACS. A double blind, randomized, placebo-control trial was conducted on 84 ACS patients. Patients were randomized to 30 days of treatment with roxithromycin (150 mg, twice daily) or matching placebo. The follow-up period was 90 days, and the primary clinical end point included cardiovascular death, unplanned revascularization and recurrent angina/MI. Anti-*C. pneumoniae* IgG positive in 24 of 43 (55.8%) patients in the roxithromycin group and 23 of 41 (56.1%)

patients in the placebo group. Anti-C. pneumoniae IgA positive in 20 of 43 (46.5%) patients in the roxithromycin group and 13 of 41 (31.7%) patients in the placebo group. Thirty-three cardiac events occurred (2 cardiovascular deaths, 9 CABG, 12 PTCA and 10 recurrent angina/MI) with 17 events in the roxithromycin group and 16 events in the placebo group. There was no significant difference of cardiac events between the roxithromycin and placebo groups. The present study suggests that antibiotic therapy with roxithromycin is not associated with reduction of cardiac events as reported by other investigators. However, therapeutic interventions may need to be specifically targeted to a group of patients who are confirmed with chronic C. pneumoniae infection.

**No. 312**

- Authors** : Leowattana W, Bhuripanyo K, Mahanonda N, Pokum S.  
**Title** : Prevalence of hyperhomocysteinemia in normal healthy Thai subjects.  
**Source** : Journal of the Medical Association of Thailand. 84:S722-9(Suppl 3), 2001(Dec).  
**Keywords** : Hyperhomocysteinemia.  
**Abstract** : The concentration of circulating total homocysteine is a sensitive marker of inadequate folate and vitamin B12 status. The elevations of plasma homocysteine concentration are associated with an increased risk of vascular disease. The primary goals of this study were to identify plasma homocysteine concentrations in Thai residents and to test for differences in homocysteine levels among sex and age categories. The authors measured plasma total homocysteine concentrations in 3,345 Shinawatra employees (1,133 males, 2,212 females aged between 20-65 years) by using fluorescence polarization immunoassay (FPIA) method. The mean plasma homocysteine concentrations of males and females were 11.495 and 8.547 micromol/L respectively. Plasma homocysteine concentrations were significantly lower in females than in males ( $p < 0.0001$ ). The age-specific plasma homocysteine levels were lower in females than in males for each group, but the levels of each group was not significantly different both in males and females. When more than 12 micromol/L was used as the cut-off value, it was found that 33.6 per cent of males and 6.69 per cent of females were classified as hyperhomocysteinemia subjects. The authors concluded that the prevalence of hyperhomocysteinemia in Thai males is more common than in females. Further investigation should be done to clarify the association between serum folate, vitamin B12, vitamin B6 concentrations and plasma homocysteine concentration.

**No. 313**

- Authors** : Leowattana W, Pokum S, Mahanonda N, Jumbunjong N.  
**Title** : Serum concentrations of lipids and apolipoprotein E in angiographically defined coronary artery disease patients.  
**Source** : Journal of the Medical Association of Thailand. 84:S684-9(Suppl.3), 2001(Dec).  
**Keywords** : Apolipoprotein E, Coronary artery diseases,  
**Abstract** : Apolipoprotein (apo) E is an important component of plasma lipoproteins and influences lipoprotein metabolism through its action as a receptor ligand. The association of serum apo E concentrations and coronary artery diseases (CAD) was investigated in 100 CAD patients (71 men, 29 women, mean age 62.0 years) and 155 healthy volunteers (87 men, 68 women, mean age 50.6 years). Patients with CAD had lower serum apo E concentrations (5.1+1.3 mg/dL) than the healthy volunteers (5.9+1.8 mg/dL,  $p < 0.001$ ). There were no significant differences between the number of disease vessels and the concentration of serum apo E. Serum apo E concentrations may have an anti-atherosclerotic effect and the serum apo E levels could be a useful parameter for defining cardiovascular risk factor.

**No. 314**

- Authors** : Leowattana W, Pokum S, Mahanonda N, Pongvarin N.  
**Title** : Rapid detection of Chlamydia pneumoniae DNA in peripheral blood mononuclear cells of coronary artery disease patients by real-time fluorescence PCR.  
**Source** : Journal of the Medical Association of Thailand. 84(Suppl.3):S658-68, 2001(Dec).  
**Keywords** : Coronary artery diseases, Chlamydia pneumoniae, PCR.  
**Abstract** : Several recent reports including serological, pathological and animal studies have associated Chlamydia pneumoniae with coronary artery disease (CAD). In order to establish whether chronic C. pneumoniae infection is linked to coronary artery disease, clinical intervention trials may be needed. However, to detect eligible patients with persistent infection, a reliable diagnostic marker must be developed for identifying cases and assessing efficacy of antichlamydial therapy. Moreover, the prevalence of circulating C. pneumoniae DNA in CAD patients varied widely from previous reports. A real-time PCR has been established by using HL-1 and HR-1 primer to amplify 437 base pairs product. Confirmation of the product was performed on LightCycler by melting curve analysis of detection probes labeled with LC-Red705. Ninety-five angiographically confirmed CAD patients and 104 normal, healthy volunteers were recruited. The mononuclear cell layer was separated from collected blood and rapid, single step real-time PCR was used to detect C. pneumoniae DNA. C. pneumoniae DNA in peripheral blood mononuclear cells (PBMC) was found in 17 per cent of 95 CAD patients and 1 per cent of 104 normal healthy volunteers (odds ratio 20.86, 95% confidence interval 2.71 - 160.67,  $p < 0.0001$ ). There was no association between C. pneumoniae DNA in PBMC and serological status. The rapid, real-time PCR showed a clear-cut result between positive and negative cases. PBMC-based real-time PCR may be a useful tool for identifying subjects carrying C. pneumoniae in the circulation or in the vascular wall as well. It will be a specific indicator of current infection and will be used as a marker for assessing the microbiological efficacy of antichlamydial therapy in clinical intervention trials.

**No. 315**

- Authors** : Lertakyamane J, Ruksamane EO, Tantiwong A, Boonsuk K, Nilpradab I, Vorakijpokatorn P, Soontrapa S.  
**Title** : The risk and effectiveness of transurethral resection of prostate.  
**Source** : Journal of the Medical Association of Thailand. 85(12):1288-95, 2002(Dec).  
**Keywords** : Transurethral Resection of Prostate.  
**Abstract** : **BACKGROUND:** To advise a patient to have transurethral resection of prostate (TURP) needs information on the benefit and complications of the procedure. Quality assurance also needs present results to be compared with future ones. **OBJECTIVES:** The authors wanted to know: 1. Whether TURP can decrease The International prostate symptom score (IPSS) and improve the Quality of Life (QOL) scores concerning urination at 1.5 months post-operatively for at least 25 per cent of the pre-operative scores?; 2. What are the common medical diseases in this type of patient?; and 3. What are the mortality and immediate complications of TURP? **METHOD:** This was a prospective, before-after design trial. All patients who came to have TURP at a tertiary care hospital were studied. IPSS and QOL scores were recorded before surgery and again when the patients came back to follow up at 1.5 months after discharge. Patients were evaluated for cardiopulmonary reserve and congestive heart failure. Anesthetic technique of choice was spinal anesthesia with 0.5 per cent bupivacaine. Anesthetic and surgical complications were recorded if the definitions were met. **ANALYSIS:** Pre-operative and 1.5 months post-operative scores were

compared using paired t-test and 95 per cent confidence interval. RESULTS: During the 13 months there were 269 consecutive males who received TURP. The mean +/- SD age was 70.4 +/- 8.8 years (range 35-97). The mean difference between pre- and post-operative IPSS was 6.7 +/- 9.1 (95% CI 5.2-7.8). Quality of Life also improved, the mean difference between pre- and post-operative QOL was 3.2 +/- 1.6 (95% CI 2.9-3.5). Most patients had ASA class 2. Common pre-operative existing diseases were hypertension (31.6%), ischemic heart disease (18.2%), diabetes (15.6%), and COPD (7.1%). Anesthetic techniques were spinal block (77.3%), epidural block (5.9%), continuous epidural (11.2%), and general anesthesia (5.6%). Intra-operative complications were reported and TUR syndrome occurred in 1 patient (0.37%). There was one surgical death 3 days post-operation, due to septic shock probably from bowel perforation. CONCLUSION : The patients' symptoms and quality of life significantly improved, but there was 1 surgical death and 1 TUR syndrome among 269.

**No. 316**

- Authors** : Lertakyamane J.  
**Title** : Anesthesiologist training, home or abroad?  
**Source** : Journal of the Medical Association of Thailand.  
85:S893-6 (Suppl.3), 2002(Sep).  
**Keywords** : Anesthesiologist.  
**Abstract** : Anesthesiology training in various countries vary a lot in structure, manpower, duration, budget, material, and equipment. Training at home results in better understanding of local problems. Anesthesiologists in developing countries have to adapt and endure the challenge of training abroad. The results are knowledges in anesthesia, new techniques and equipment, new contacts and understanding of other way of life. But many countries have lost their anesthesiologists from emigration. Training abroad is useful only when the trainees bring the knowledge back home and help their countrymen.

**No. 317**

- Authors** : Letelier LM, Udol K, Ena J, Weaver B, Guyatt GH.  
**Title** : Effectiveness of amiodarone for conversion of atrial fibrillation to sinus rhythm - A meta-analysis.  
**Source** : Archives of Internal Medicine. 163(7):777-785, 2003.  
**Keywords** : Acute myocardial-infarction, Low-dose amiodarone, Clinical-trials, Digoxin, Intravenous amiodarone, Placebo, Meta analyses, Efficacy, Bias, Intervention  
**Abstract** : Background: Although clinicians sometimes choose amiodarone to convert atrial fibrillation (AF) to sinus rhythm, no current and comprehensive systematic review has summarized its effectiveness. Objective: To review the effectiveness of amiodarone in converting AF to sinus rhythm over a 4-week period. Methods: Two reviewers conducted a systematic search for randomized trials in databases, complemented by hand searches and contact with experts. Selected trials compared amiodarone with placebo, digoxin, or calcium channel blockers for conversion of AF to sinus rhythm. Reviewers evaluated the methodology and extracted data from each primary study. Results: Twenty-one studies met eligibility criteria. Duration of AF proved to be a source of heterogeneity, leading to 2 analyses. The relative risk (RR) for achieving sinus rhythm was 4.33 (95% confidence interval [CI], 2.76-6.77) for trials with mean AF duration of greater than 48 hours and 1.40 (95% CI, 1.25-1.57) for those with AF of 48 hours or less. The risk differences for these 2 groups were 27% and 26%, respectively, yielding a number needed to treat of 4 for both groups. The low control event rate among trials with long

duration of AF, compared with that of trials with a duration of 48 hours or less, explained the difference in the RR for conversion. We found that the size of the left atrium, presence of cardiovascular disease, and protocols of amiodarone administration did not influence the magnitude of effect. Serious adverse events were infrequent. Conclusions: Amiodarone is effective for converting AF to sinus rhythm in a wide range of patients. Although use of amiodarone is apparently safe, safety data are too scarce for definitive conclusions.

**No. 318**

- Authors** : Likitmasku S, Kiattisathavee P, Chaichanwatanakul K, Punnakanta L, Angsusingha K, Tuchinda C.
- Title** : Increasing prevalence of type 2 diabetes mellitus in Thai children and adolescents associated with increasing prevalence of obesity.
- Source** : Journal of Pediatric Endocrinology and Metabolism. 16(1):71-77, 2003.
- Keywords** : Type 2 Diabetes Mellitus, Body Mass Index, Obesity, Children, Adolescents, Thailand.
- Abstract** : Type 2 diabetes mellitus (DM) is being diagnosed more frequently in children and adolescents. Thailand has a low incidence of childhood DM. This study reviewed patients with DM in the Division of Pediatric Endocrinology, Faculty of Medicine, Siriraj Hospital compared to our previous study. The results demonstrate that type 2 DM in Thai children and adolescents has increased from 5% during 1986-1995 to 17.9% during 1996-1999. Mean age 2 was 11.6 years. Mean BMI was 27.8 kg/m<sup>2</sup>. Fifty-six percent were diagnosed on routine examination. The period of increase in type 2 DM is associated with an increase of obesity prevalence from 5.8% in 1990 to 13.3% in 1996. This result emphasizes the importance of encouraging daily physical activity and healthy diet in our populations and also alerts our pediatricians and endocrinologists to the possibilities of type 2 DM in these age groups.

**No. 319**

- Authors** : Likitmaskul S, Wekawanich J, Wongarn R, Chaichanwatanakul K, Kiattisakthavee P, Nimkarn S, Prayongklin S, Weerakulwattana L, Markmaitree D, Ritjarean Y, Pookpun W, Punnakanta L, Angsusingha K, Tuchinda C.
- Title** : Intensive diabetes education program and multidisciplinary team approach in management of newly diagnosed type 1 diabetes mellitus: a greater patient benefit, experience at Siriraj Hospital.
- Source** : Journal of the Medical Association of Thailand. 85:S488-95(Suppl 2), 2002 (Aug).
- Keywords** : Type 1 Diabetes.
- Abstract** : It is accepted worldwide that an effective multidisciplinary management team is essential for providing comprehensive self-management training to type I diabetics and their families. Therefore, the authors developed an intensive multidisciplinary education team that included pediatric endocrinologists, a dietitian, a psychologist, nurses, scientists and volunteers in the Department of Pediatrics, Siriraj Hospital in August 1996. This study aimed to analyze twenty-four newly diagnosed diabetics who underwent this specified program and multidisciplinary team approach in comparison to twenty-eight diabetic patients who were diagnosed before the program and team were established in order to see whether the length of hospitalization had been reduced and to compare the readmission rates of recurrent DKA with previous patients. The results demonstrated that by using the intensive program and multidisciplinary team the average length of admission was reduced from 36.04 days to 17.63 days (p value = 0.03). The readmission rate in the first year after diagnosis

was also reduced from 17.8 per cent to 4 per cent. Concerning diabetes control, the average HbA1c level showed significantly better control. Therefore, this study demonstrated a successful team and program for newly diagnosed Thai childhood and adolescent diabetics and also emphasized that a multidisciplinary team approach with an effectively intensive education program is important in helping diabetics and families cope with their emerging problems and receive the long-term benefits of effective self-care.

**No. 320**

- Authors** : Lim DL, Shek LP, Shaikh WA, Baratawidjaja K, Trakultivakorn M, Vichyanond P, Cheong N, Chua KY, Lee BW.  
**Title** : Pattern of sensitization of *Blomia tropicalis* and its recombinant allergens in four tropical Asian populations.  
**Source** : Journal of Allergy and Clinical Immunology. 109(1):531(Suppl. S), 2002.  
**Keywords** : *Blomia Tropicalis*, Recombinant Allergens.

**No. 321**

- Authors** : Lolekha P, Leowattana W, Kangkagate C, Mahanonda N, Pokum S.  
**Title** : Serum lipoprotein (a) level and restenosis after percutaneous coronary intervention.  
**Source** : Journal of the Medical Association of Thailand. 84:S628-35(Suppl.3), 2001(Dec).  
**Keywords** : Serum lipoprotein, Percutaneous coronary.  
**Abstract** : Restenosis is regarded as the result of a combination of various pathological events. The mechanisms are complex and not completely understood. In this study, the authors focused on the lipoprotein (a) (Lp (a)). It is one of the novel risk factors in atherosclerotic vascular disease. Numerous clinical studies suggest that individuals with elevated blood levels of Lp (a) have been shown to be associated with atherosclerotic vascular disease. However, whether a high serum concentration of Lp (a) affects restenosis after PCI remains controversial. In this study, the relationship between serum Lp (a) levels and restenosis after PCI was examined to investigate whether serum Lp (a) levels may be a predictor of restenosis after PCI. Of the 100 patients studied, 31 patients (31%) were classified as the restenosis group and 69 patients (69%) the non-restenosis group. Both groups did not significantly differ in serum concentration of total cholesterol, triglyceride, HDL-C, and LDL-C. The mean serum Lp (a) concentration in patients with restenosis was 41.50 +/- 34.99 mg/dL compared with a mean serum Lp (a) concentration of 29.87 +/- 25.47 mg/dL in those without restenosis. There was no statistical significance of Lp (a) level between the restenosis and non-restenosis groups (p=0.06). In healthy subjects, the normal reference range of serum Lp (a) concentration is below 30 mg/dL. From this reference, if a cut off point of serum Lp (a) concentration equal to 30 mg/dL or above to identify high Lp (a) level group was used. High serum Lp (a) level was established in 15 patients with restenosis versus 21 patients without restenosis. From this cut off point of serum Lp (a) level, the authors did not find a correlation between serum Lp (a) level and the restenosis group. (p=0.08).

**No. 322**

- Authors** : Lorvidhaya V, Chitapanarux I, Sangruchi S, Lertsanguansinchai P, Kongthanasarat Y, Tangkaratt S, Visetsiri E.
- Title** : Concurrent mitomycin C, 5-fluorouracil, and radiotherapy in the treatment of locally advanced carcinoma of the cervix: A randomized trial.
- Source** : International Journal of Radiation Oncology Biology Physics. 55(5):1226-1232, 2003.
- Keywords** : Carcinoma of The Cervix, Radiotherapy, Concurrent Chemoradiotherapy, Complications.
- Abstract** : Purpose: This is a prospective, Phase III multicenter randomized trial to assess the effectiveness of concurrent intravenous mitomycin C, oral 5-fluorouracil (5-FU), and radiotherapy (RT) in locally advanced carcinoma of the cervix. Methods and Materials: Between January 1988 and November 1994, 926 patients with locally advanced carcinoma of the cervix, FIGO Stage IIB-IVA, were entered into this study. The patients were randomized into four arms, as follows: Arm 1: conventional RT; Arm 2: conventional RT and adjuvant chemotherapy; Arm 3: conventional RT plus concurrent chemotherapy; Arm 4: conventional RT plus concurrent chemotherapy and adjuvant chemotherapy. Concurrent chemotherapy consisting of intravenous mitomycin C at 10 mg/m<sup>2</sup> was given on Days 1 and 29, and oral 5-FU at 300 mg/day was administered on Days 1-14 and 29-42 during RT. Adjuvant chemotherapy of 5-FU orally at 200 mg/day was given for three courses of 4 weeks, with a 2-week rest every 6 weeks. Six centers participated in the trial. Results: The median follow-up time was 89 months. Acute side effects were generally higher in concurrent arms, but most of the patients tolerated the treatment well. Bone marrow toxicity was also higher in concurrent arms. The 5-year actuarial disease-free survival (DFS) was 48.2%, 54.1%, 64.5%, and 59.7% for arms 1, 2, 3, and 4, respectively. The pattern of failure revealed a significant increase in locoregional recurrence in the nonconcurrent chemoradiotherapy arm. The local recurrence was 25.5%, 20.6%, 14.3%, and 17.6% for arms 1, 2, 3, and 4, respectively. The metastatic rates were not significantly different in all four arms. At the time of analysis, there were no increases in late side effects, especially in gastrointestinal and genitourinary systems. Conclusions: Concurrent chemotherapy, mitomycin C, and 5-FU together with conventional RT showed an improved DFS rate when compared with conventional RT alone in patients with locally advanced carcinoma of the cervix.

**No. 323**

- Authors** : Louisirirochanakul S, Kanoksinsombat C, Likanonsakul S, Sunthornkachit R, Supanit I, Wasi C.
- Title** : Patterns of Anti-HIV IgG3, IgA and p24Ag in perinatally HIV-1 infected Infants.
- Source** : Asian Pacific Journal of Allergy and Immunology. 20(2):99-104, 2002.
- Keywords** : Human-immunodeficiency-virus, Polymerase chain-reaction, Transmission, HIV-1-Infected mothers, Early diagnosis, Type-1, Children, Zidovudine, Thailand, Trial
- Abstract** : The antibody patterns of HIV-1 IgG3, IgG and, IgA and of HIV-1 p24 antigen were investigated in Thai infants born to mothers infected with HIV-1. In the 17 HIV-1 infected infants, anti-HIV antibodies were detected continuously over a period of 15-18 months and a high level of specific IgG3 subclass was observed. Anti-HIV IgA could be detected at 6 months of age whereas p24Ag was detected at 2 months. In 79 uninfected infants, maternal anti-HIV IgG gradually decreased over 9 months whilst specific IgG3 decayed rapidly during the first 6 months. Both p24Ag and anti-HIV IgA were not found in these uninfected infants. Thus, the disappearance of anti-IgG3 subclass antibodies

within 6 months can predict whether infants are uninfected whereas the persistence of anti-HIV IgG and IgG3 subclass anti. bodies, the production of anti-HIV IgA antibody and the presence of p24Ag appear as an adjunct to the diagnosis of HIV vertical transmission. The necessary assays are relatively simple and could be performed Individually.

**No. 324**

- Authors** : Louisirotchanakul S, Kanoksinsombat C, Thongput A, Puthavathana P, Wasi C.
- Title** : Anti-HIV-1 antibody testing using modified gelatin particle agglutination: a large field study.
- Source** : Journal of the Medical Association of Thailand. 84(12):1708-13, 2001(Dec).
- Keywords** : Anti-HIV-1 antibody, Gelatin particle agglutination.
- Abstract** : Anti-HIV testing using gelatin particle agglutination (GPA) assay was investigated in parallel with ELISAs from routine service at Siriraj Hospital. In the first strategy, 174,032 sera from a patient population with an HIV-1 seroprevalence of 13.72 per cent were assayed using reduced volumes of GPA reagents, giving a cost reduction of 40 per cent. In the second strategy, 90,560 pregnant women and 48,936 emigrant workers with an HIV-1 seroprevalence of 2.2 per cent and 0.3 per cent, respectively, were tested in pools of 4 sera using the manufacturer's recommended volumes, giving a cost saving of 67 per cent. Overall, the sensitivity and specificity were almost identical with standard methods. Thus, parallel use of either modified GPA might be considered appropriate when testing large numbers of samples. However, both modified versions of GPA are not recommended as the first assay for diagnostic or blood bank screening especially in high prevalence of HIV infection.

**No. 325**

- Authors** : Louisirotchanakul S, Liu HL, Roongpisuthipong A, Nakayama EE, Takebe Y, Shioda T, Wasi C.
- Title** : Genetic analysis of HIV-1 discordant couples in Thailand: Association of CCR2 64I homozygosity with HIV-1-negative status.
- Source** : Journal of Acquired Immune Deficiency Syndromes. 29(3):314-315, 2002.
- Keywords** : Infection, Sdf1-3'a, Ccr5-Delta-32, Prevalence, Phenotype.

**No. 326**

- Authors** : Louisirotchanakul S, Myint KS, Srimee B, Kanoksinsombat C, Khamboonruang C, Kunstader P, Wasi C.
- Title** : The prevalence of viral hepatitis among the Hmong people of northern Thailand.
- Source** : Southeast Asian J Trop Med Public Health. 33(4):837-44, 2002(Dec).
- Keywords** : Viral hepatitis, Hmong.
- Abstract** : Sera from 269 Hmong people (102 males and 167 females, with mean age 35.4 years, range 16-63 years) were examined in order to determine the seroprevalence of hepatitis virus infection. The seroprevalence rates for HAV (hepatitis A virus), HBV (hepatitis B virus), HCV (hepatitis C virus), HDV (hepatitis D virus), HEV (hepatitis E virus), HGV (hepatitis G virus) and TTV (TT virus) infection were 87.8% (n=140), 76.0% (n=150), 2.0% (n=150), 0.7% (n=150), 6.5% (n=139), 5.3% (n=94) and 25.6% (n=121) respectively. The rate for carriers of HBV (HBsAg) was 13.8% (20.5% in males and 9.6% females) with a peak prevalence in the 21-40 year age group. A high rate of HAV seropositivity was found among the younger subjects. The rate of HEV seroprevalence was low. The prevalence of TTV-DNA was high with no difference between the

sexes. HGV-RNA prevalence was low and seen primarily in males. This study indicates that the Hmong people are endemically infected with HAV and HBV infection and should be considered for targeted vaccination. The role of TTV and HGV in producing illness and hepatic disease has yet to be determined in this population.

- No. 327**
- Authors** : Louisirirochanakul S, Roongpisuthipong A, Poonarkngeng R, Chalyakool P, Sangswang S, Wasi C.
- Title** : Virological, immunological and host factors in HIV-1 discordant couples in Thailand.
- Source** : Asian Pacific Journal of Allergy and Immunology. 19(4):259-265, 2001(Dec).
- Keywords** : Immunodeficiency-Virus Type-1, Antibodies, Heterosexual Transmission, Vertical Transmission, Seronegative Persons, Sex Workers, Subtype-E, Infection, Ccr5, Lymphocytes.
- Abstract** : The potential factors of resistance to HIV-1 infection were investigated in 23 HIV discordantly infected couples, of each, one partner had HIV infection and the matched spouse was not infected. Both partners of the HIV discordant couples possessed comparable number of CD4(+) cells expressing CCR5. Our study demonstrated that resistance to HIV-1 infection was not due to low level of HIV viral load in their infected-matched spouses. In addition, selective biological phenotype of HIV clinical Isolates, which is indicative for risk of transmission, could not be determined in this study. However, we have demonstrated that the unknown genetic factor(s), and neutralizing antibody of broad and high activity could be taken into an account for resistance to HIV infection in the HIV discordant couples.
- No. 328**
- Authors** : Lyles RH, Williams JK, Chuachoowong R.
- Title** : Correlating two viral load assays with known detection limits.
- Source** : Biometrics. 57(4):1238-1244, 2001(Dec).
- Keywords** : bias, censoring, likelihood, numerical integration, Pearson's coefficient
- Abstract** : A timely objective common to many HIV studies involves assessing the correlation between two different measures of viral load obtained from each of a sample of patients. This correlation has scientific utility in a number of contexts, including those aimed at a comparison of competing assays for quantifying virus and those aimed at determining the level of association between viral loads in two different reservoirs using the same assay. A complication for the analyst seeking valid point and interval estimates of such a correlation is the fact that both variables may be subject to left censoring due to values below assay detection limits. We address this problem using a bivariate normal likelihood that accounts for left censoring of two variables that may have different detection limits. We provide simulation results to evaluate sampling properties of the resulting correlation estimator and compare it with ad hoc estimators in the presence of nondetects. In an effort to obtain improved confidence interval properties relative to the Wald approach, we evaluate and compare profile likelihood-based intervals. We apply the methods to HIV viral load data on women and infants from a trial in Bangkok, Thailand, and we discuss an extension of the original model to accommodate interval censoring arising due to the study design.

**No. 329**

- Authors** : Mahaisavariya B, Sitthiseripratip K, Tongdee T, Bohez ELJ, Vander Sloten J, Oris P.
- Title** : Morphological study of the proximal femur: a new method of geometrical assessment using 3-dimensional reverse engineering.
- Source** : Medical Engineering and Physics. 24 (9):617-622, 2002.
- Keywords** : morphological study, proximal femur, reverse engineering technique
- Abstract** : This study presents a new method of using computerized tomography images combined with the reverse engineering technique to obtain and analyse the three-dimensional inner and outer geometry of the proximal cadaveric femur. Three-dimensional models were reconstructed from the computerized tomography images and approximated with 2D and 3D fitting algorithms based on reverse engineering methods. The following parameters were calculated for each femur: femoral head diameter, femoral neck axis, femoral shaft axis, anteversion angle and neck-shaft angle. These data represent the geometry of the studied proximal femur, and can be used for the design of proper size and shape of femoral prostheses and trochanteric nail systems.

**No. 330**

- Authors** : Mahaisavariya P, Chaiprasert A, Manonukul J, Khemngern S.
- Title** : Scrofuloderma and Sweet's syndrome.
- Source** : International Journal of Dermatology. 41(1):28-31, 2002(Jan).
- Keywords** : Scrofuloderma, Sweet's syndrome.
- Abstract** : **BACKGROUND:** In recent years, the rare association of Sweet's syndrome with nontuberculous mycobacterial lymphadenitis has been reported. **OBJECTIVE:** To report the clinical, demographic, and bacteriologic data and association with Sweet's syndrome of 18 patients with scrofuloderma and scrofuloderma-like condition caused by nontuberculous mycobacterial infections seen during the past 7 years (1994-2000). **METHODS:** In all patients, a biopsy specimen was obtained for histopathologic and microbiologic studies. Patients from whom *Mycobacterium tuberculosis* and nontuberculous mycobacteria were isolated from the culture of skin biopsy specimens were included. Deep fungal infection was excluded by the lack of a fungal element in histologic section and cultural methods. The patients were treated with antimicrobials or antituberculous drugs according to the causative species. **RESULTS:** Eighteen cases of scrofuloderma (nine male, nine female; mean age, 36.9 years) were found among 104 patients with cutaneous tuberculosis and nontuberculous mycobacterial cutaneous infections. Sixteen of the 18 cases had lymphadenitis as the underlying focus of scrofuloderma: 15 cases occurred in the cervical group and one case in the inguinal area. One case drained from the soft tissue and one from the paranasal air sinus. Five cases had multiple episodes of Sweet's syndrome during the course of treatment. Most cases in this group (four of the five) were middle-aged women with cervical lymphadenitis, and the most common species were rapid growers. **CONCLUSIONS:** Age, sex, and the site of infection may have some influence on the association with Sweet's syndrome in nontuberculous mycobacterial infections.

**No. 331 (127)**

- Authors** : Mahanonda N, Leowattana W, Kangkagate C, Lolekha P, Pokum S.  
**Title** : Homocysteine and restenosis after percutaneous coronary intervention.  
**Source** : Journal of the Medical Association of Thailand. 84:S636-44(Suppl.3), 2001(Dec).  
**Keywords** : Homocysteine, Restenosis, Percutaneous coronary intervention.  
**Abstract** : Numerous clinical studies in Western and Asian countries suggest that individuals with elevated blood levels of homocysteine have an increased risk of atherosclerosis, myocardial infarction, cerebral infarction, and deep vein thrombosis. Homocysteine is also known to induce both atherogenic and thrombogenic mediators in cultured vascular cells so that homocysteine may influence the damage of endothelial cells, promote smooth muscle cell growth, induce atherogenic mediators and thrombus formation after coronary angioplasty. The association between homocysteine and restenosis after percutaneous coronary intervention (PCI) has been discussed. In this study, the relationship between plasma homocysteine levels and restenosis after PCI to investigate whether plasma homocysteine levels may be a predictor of restenosis after PCI was examined. One hundred consecutive patients who underwent successful PCI were enrolled and plasma homocysteine level was measured in all patients prior to PCI. Plasma homocysteine level was obtained in 99 of 100 patients who had angioplasty. The mean plasma homocysteine concentration in the enrolled patients was 13.61 +/- 6.04 micromol/L. The minimum and maximum of plasma homocysteine were 4.40 micromol/L and 50.00 micromol/L, respectively. In healthy subjects, the normal reference range of homocysteine level is 5-15 micromol/L. However, recent data suggest that some patients may be at increased cardiovascular and cerebrovascular risk at levels as low as 12 micromol/L. For this reason, both cut off points of homocysteine level > or = 15 micromol/L or > or = 12 micromol/L to identify the high homocysteine level group were used. Of 99 patients, high homocysteine level (> or = 15 micromol/L) was established in 9 patients with restenosis versus 20 patients without restenosis. If the cut off point of homocysteine level > or = 12 micromol/L was used, high homocysteine level was established in 14 patients with restenosis versus 39 patients without restenosis. From both cut off points of homocysteine level, there was no correlation between plasma homocysteine level and the restenosis group. (p>0.05).

**No. 332**

- Authors** : Mahanonda R, Sa-Ard-lam N, Yongvanitchit K, Wisetchang M, Ishikawa I, Nagasawa T, Walsh DS, Pichyangkul S.  
**Title** : Upregulation of co-stimulatory molecule expression and dendritic cell marker (CD83) on B cells in periodontal disease  
**Source** : Journal of Periodontal Research. 37(3):177-183, 2002.  
**Keywords** : Co-Stimulatory Molecules, Antigen Presenting Cells, B Cells, Periodontitis.  
**Abstract** : T cells and their cytokines are well known for their important role in the pathogenesis of periodontitis. To date, the role of antigen presenting cells (APCs), which are known to be critical in the regulation of T cell response, has been poorly investigated in periodontitis. In this study, we analyzed the expression of co-stimulatory molecules (CD80 and CD86) and CD83, which is a marker of mature dendritic cells, on gingival cells that were isolated from severe periodontitis tissues, with the use of flow cytometry. Significant upregulation of CD86 and CD83 expression was detected in periodontitis lesions, and most of this occurred on B cells. In vitro peripheral blood mononuclear cell cultures showed that stimulation with different periodontopathic bacteria, that included Porphyromonas gingivalis, Actinobacillus actinomycetemcomitans, Prevotella intermedia, and Actinomyces viscosus, upregulated both CD86 and CD83 expression on B cells. Therefore, the presence of plaque bacteria may be responsible for the

enhanced expression seen in vivo on gingival B cells. APC function by bacterial-activated B cells was further investigated using allogeneic mixed leukocyte reactions. After 24 h culture with either *A. actinomycetemcomitans* or *P. gingivalis*, these activated B cells performed as potent APCs in mixed leukocyte reactions, and they stimulated T cells to produce high levels of gamma interferon and minimal interleukin-5. In conclusion, periodontopathic bacterial-induced B cell activation with upregulation of CD86 and CD83 may be associated with enhanced APC function. The results of this study suggest, therefore, that infiltrated gingival B cells have a possible role as APCs in the regulation and maintenance of local T cell response in periodontitis.

**No. 333**

- Authors** : Mahasandana C, Pung-Amritt P, Treesucon A, Petrarat S, Veerakul G, Visudhiphan S, Yenchitsomanus PT.
- Title** : Carrier detection by DNA linkage analysis in eighty Thai hemophilia A families.
- Source** : Journal of the Medical Association of Thailand. 85:S513-21(Suppl 2), 2002 (Aug).
- Keywords** : DNA Linkage Analysis, Hemophilia A, Polymerase Chain Reaction.
- Abstract** : DNA linkage analysis was performed in Thai hemophilia A families to evaluate its value for carrier detection. Both intragenic and extragenic polymorphic DNA regions of the factor VIII gene, including Bcl I-RFLP in intron 18, microsatellites (CA repeats) in introns 13 and 22, and extragenic StI4 (DXS 52) VNTR, were amplified by polymerase chain reaction (PCR) before analyses by appropriate electrophoretic procedures. A total of 80 Thai hemophilia A families (48 with a family history and 32 with a sporadic case), containing 349 DNA samples from 90 hemophilia A patients, 143 parents, and 116 relatives, were analyzed. Heterozygosities in the patients' mothers from both families with a family history and with a sporadic case were observed in 71 out of 80 families (88.75%) for all polymorphic DNA markers analyzed. The carrier status could be identified in 36 females and excluded in 44 females. This result indicates that the DNA linkage analysis can be used for carrier detection or exclusion in the majority of Thai hemophilia A families. It should also be useful for prenatal diagnosis in families at risk of hemophilia A, which is part of the prevention and control of this disease.

**No. 334**

- Authors** : Manatsathit S, Dupont HL, Farthing M, Kositchaiwat C, Leelakusolvong S, Ramakrishna BS, Sabra A, Speelman P, Surangsrirat S.
- Title** : Guideline for the management of acute diarrhea in adults.
- Source** : Journal of Gastroenterology and Hepatology. 17:S54-S71 (Suppl. S), 2002.
- Keywords** : Hemolytic-Uremic-Syndrome, Escherichia-Coli O157-H7, Human-Immunodeficiency-Virus, Acute Travelers Diarrhea, Acute Watery Diarrhea, First-Line Treatment, Double-Blind Trial, Vibrio-Cholerae, Symptomatic Treatment, Nosocomial Diarrhea.

**No. 335**

- Authors** : Manuskiatti W, Sivayathorn A, Leelaudomlapi P, Fitzpatrick RE.
- Title** : Treatment of acquired bilateral nevus of Ota-like macules (Hori's nevus) using a combination of scanned carbon dioxide laser followed by Q-switched ruby laser.
- Source** : Journal of the American Academy of Dermatology. 48 (4):584-591, 2003.
- Keywords** : Alexandrite Laser, Yag Lasers, Nd, Therapy, Melasma, Term.
- Abstract** : Background Acquired bilateral nevus of Ota-like macules (Hori's nevus) is a dermal pigmented lesion commonly seen in middle-aged women of Asian descent. The Q-switched ruby laser (QSRL) has been used successfully to

treat a variety of benign pigmented lesions. Multiple, sequential treatments are typically required for complete clearance of the dermal pigmented dermatoses. Objective: The purpose of this study was to determine the efficacy of QSRL in the treatment of Hori's nevus and the beneficial effect of epidermal ablation using the scanned carbon dioxide (CO<sub>2</sub>) laser before QSRL. Methods: A total of 13 women from Thailand with Hori's nevus were randomly treated with the scanned CO<sub>2</sub> laser followed by QSRL on one side of their face, and QSRL alone on the other side. The same fluence of QSRL was used on both sides in individual patients. The treatment response was objectively evaluated by measuring the melanin index using a Mexameter (Courage & Khazaka Electronic GmbH, Koln, Germany), and subjectively assessed by the patients before treatment and 3 and 16 months after treatment. Adverse sequelae of the treatment and the patients' tolerance were also evaluated at the same follow-up visit. Results: The 3- and 16-month posttreatment melanin index was significantly decreased compared with that of pretreatment on both treated sites and this corresponded to the patients' subjective evaluations. The response rate, defined as "the percentage of reduction in melanin index," was significantly higher on the sides treated with scanned CO<sub>2</sub> laser followed by QSRL, compared with the sides irradiated with QSRL alone at both follow-up visits. At the 3-month follow-up, the most common adverse effect was hypopigmentation, found in 15% (2 of 13) of the patients on the sites treated with QSRL alone, and on the sites treated with scanned CO<sub>2</sub> laser followed by QSRL (8%, 1/13). Erythema was observed in 15% (2/13) of the patients only on the sites that received combination treatment. However, no adverse sequelae were observed at the 16-month posttreatment follow-up. conclusion: Epidermal ablation with scanned CO<sub>2</sub> laser before the use of the pigment-specific laser may be an effective technique for increasing therapeutic efficacy in the treatment of dermal pigmented dermatoses.

**No. 336**

- Authors** : Manuskiatti W, Tantikun N.  
**Title** : Treatment of trichostasis spinulosa in skin phototypes III, IV, and V with an 800-nm pulsed diode laser.  
**Source** : Dermatologic Surgery. 29(1):85-88, 2003.  
**Keywords** : Assisted hair removal.  
**Abstract** : BACKGROUND. Trichostasis spinulosa (TS) is a common follicular disorder that results from the retention of multiple vellus hairs within pilosebaceous follicles. A variety of treatment modalities have been used with variable but largely transient success. OBJECTIVES. To determine whether a pulsed diode laser irradiation would provide a therapeutic response to TS for a prolonged period. METHODS. Thirteen subjects with untreated TS and skin phototypes III, W, and V were treated with a 800-nm pulsed diode laser at fluences ranging from 24 to 40J/cm<sup>2</sup> (mean, 36J/cm<sup>2</sup>) and a 12- to 20-ms (mean 18 ms) pulse width. Two treatments were delivered at 4-week intervals. Evaluation of improvement was performed at 4 and 20 weeks after the last treatment by a blinded assessment of clinical photographs. RESULTS. Complete clearing of the lesions was achieved for a period of 8 to 12 weeks. A decrease in dark-plug appearance of greater than 50% was noted in half of the subjects 20 weeks after the second treatment. No pigmentary changes and scarring occurred in any subjects. CONCLUSION. Pulsed diode laser proved to be a safe and long-term effective treatment for TS in dark-skinned individuals.

**No. 337**

- Authors** : Maranetra KN, Chuaychoo B, Dejsomritrutai W, Chierakul N, Nana A, Lertakyamane J, Naruman C, Suthamsmai T, Sangkaew S, Sreelum W, Aksornin M, Dechapol J, Sathet W.
- Title** : The prevalence and incidence of COPD among urban older persons of Bangkok Metropolis.
- Source** : Journal of the Medical Association of Thailand. 85(11):1147-55, 2002(Nov).
- Keywords** : COPD, Urban Older.
- Abstract** : COPD substantially affects the national healthcare resource and healthcare cost especially among the older persons. Identifying the accurate prevalence and incidence reflects the scale of problem posed by COPD. This epidemiological study using the criteria for diagnosing COPD based on ratio of FEV1.0/FVC less than 70 per cent and the reversibility of less than 15 per cent increase of post bronchodilator FEV1.0 in the absence of parenchymal lesions and cardiomegaly in CXR (PA and lateral view) revealed the prevalence (1998) of COPD among the 3094 older persons aged 60 years and over in the communities of Bangkok Metropolis 10 km around Siriraj Hospital was 7.11 per cent (95% CI: 6.21-8.01), whereas the incidence (1999) of COPD was 3.63 per cent (95% CI: 2.83-4.43). Both the prevalence and the incidence were increased with increasing age. The disease occurred predominantly among male smokers. The distribution of mild : moderate : severe COPD in the prevalence study was 5.6:2.2:1. The current findings also suggest that tobacco smoking is the prime important cause of COPD and the indoor pollution especially cooking smoke is not significant. In particular, the unexpectedly high incidence compared with prevalence in this population probably represents the warning message to the national policy maker for prompt and effective health promotion and disease prevention to prevent further social and economic loss.

**No. 338**

- Authors** : Methetrairut A, Singalavanija A, Ruangvaravate N, Tuchinda R.
- Title** : Evaluation of screening tests and prevalence of glaucoma: integrated health research program for the Thai elderly.
- Source** : Journal of the Medical Association of Thailand. 85(2):147-53, 2002(Feb).
- Keywords** : Glaucoma, Elderly.
- Abstract** : The purposes of this study were to evaluate the accuracy of glaucoma screening tests and to assess the prevalence of glaucoma in an elderly Thai population over 60 years of age. This was a cross-sectional study. 3706 subjects were recruited from 33 communities in the vicinity of Siriraj Hospital. All received an eye examination from ophthalmologists and general practitioners including visual acuity, Schiottz tonometry and optic disc evaluation in their residential communities. Subjects who were suspected of having glaucoma were re-examined at the Glaucoma Clinic, Siriraj Hospital. They were then classified as having definite glaucoma of a specific type or as not having glaucoma. The overall prevalence of glaucoma was 6.1 per cent (128/2092). The percentages of primary open angle glaucoma, primary angle closure glaucoma, normotension glaucoma and secondary glaucoma were 47.7 per cent, 41.4 per cent, 9.4 per cent, and 1.6 per cent respectively. The sensitivity and specificity of the screening tests performed by ophthalmologists were 100 per cent and 97.2 per cent and those performed by general practitioners were 21.7 per cent and 96.5 per cent.

**No. 339**

- Authors** : Mitacek EJ, Brunnemann KD, Polednak AP, Limsila T, Bothisuwan K, Hummel CF.
- Title** : Rising leukemia rates in Thailand: The possible role of benzene and related compounds in cigarette smoke.
- Source** : Oncology Reports. 9(6):1399-1403, 2002.
- Keywords** : Tobacco Smoking, Benzene, 1,3-Butadiene, Toluene, Isoprene, Acrolein, Leukemia.
- Abstract** : Epidemiological Studies suggest that cigarette smoking is associated with an increased risk of leukemia and that benzene and related Compounds in cigarette smoke may contribute to this elevated risk. This report presents new findings on selected components of cigarette smoke (including benzene and 1.3-butadiene) from major brands of cigarettes sold in Thailand, which represent about 80% of market share. Tested were also two major and popular brands of U.S. cigarettes sold in Thailand, representing about 10% of market share. The cigarettes tested were filter and non-filter, and with high and 'low' tar and nicotine levels. The observed range for benzene, toluene and 1,3-butadiene were found in the range of 25.5-63.7, 36.4-79.8 and 44.6-78.7 mug/ciuarrette, respectively. The amount of acrolein ranged from 79.9-181 mug/ cioarrette and for isoprene from 313-694 mug/cigarette. Yields of these substances showed no correlation with tar deliveries in mainstream smoke. Consumption of tobacco products increased in Thailand since 1970. This Study also showed increases in leukemia mortality rates in Thailand, and in the relative frequency of leukemia among incident cancers diagnosed at a large hospital in Bangkok. Exposure to benzene and related compounds in cigarette smoke may have contributed to these trends. Analytic epidemiological studies are needed on the relationship between these compounds in smoke from tobacco products used in Thailand. These preliminary findings support the need for voluntary and/or government-regulated reduction in smoke yields of benzene and related compounds in tobacco products, and for expanded smoking prevention and cessation efforts, in Thailand.

**No. 340**

- Authors** : Nana A. Laohaprasitiporn D. Soongswang J. Durongpisitkul K.
- Title** : Pediatric cardiology at Siriraj Hospital: past, present and future.
- Source** : Journal of the Medical Association of Thailand. 85:S613-29(Suppl 2), 2002(Aug).
- Keywords** : Pediatric cardiology, Congenital heart disease.
- Abstract** : The incidence of congenital heart disease (CHD) at Siriraj Hospital for the year 2000 was 4.36 patients per 1,000 livebirths. Types of congenital heart diseases seen by the authors were VSD (18.3%), PDA (16.3%), ASD (16.3%), combined simple left to right shunt lesion (24.7%), tetralogy of Fallot (TF; 6%), D-TGA 2 per cent, other complex congenital heart 8 per cent. Overall 3 out of 1,000 livebirths will have congenital heart disease that will require immediate intervention including cardiac catheterization and surgical intervention. At the same period of time an average of 750 new cases of children were referred annually for evaluation and treatment of cardiac related problems. Reports of acquired heart disease such as acute rheumatic fever, myocarditis, Kawasaki's disease and arrhythmia problem were summarized here. The Division of Pediatric Cardiology performs both diagnostic and intervention cardiac catheterization in almost 310 children and adults with congenital heart disease yearly. Out of this 35 per cent had interventional procedures including balloon valvuloplasty, balloon angioplasty and stenting, device closure of atrial septal defect and patent ductus arteriosus and radiofrequency ablation of abnormal conduction

pathway. Major progress has been made in pediatric cardiac imaging over the past two decades. At Her Majesty's Cardiac Center, cardiac MRI has been used to evaluate patients with congenital heart disease since June 2000. There were 146 congenital heart disease patients who had cardiac MRI performed for the evaluation of anatomy, function, left to right shunt, and flow regurgitation quantification. Conclusion: Pediatric Cardiology practice has evolved over the past decade and expanded from clinical practice to therapeutic intervention procedures.

**No. 341**

- Authors** : Neungton N, Neungton S, Leelaphatanadit C, Dangrat C, Soiapornkul R.  
**Title** : p53 tumor suppressor gene mutation in ovarian cancer in Thai patients.  
**Source** : Journal of the Medical Association of Thailand. 85(6):658-67, 2002(Jun).  
**Keywords** : p53 Gene, Ovarian Cancer  
**Abstract** : OBJECTIVES: To characterize molecular mutations of p53 gene in Thai ovarian cancer and compare the mutations with their pathological and clinical findings. MATERIAL AND METHOD: Direct DNA sequencing of hot spot region of p53 gene (exons 5 to 8) from 28 primary ovarian cancer tissues, 2 metastatic tumors and their paired blood samples was performed. The detected mutations were compared to the pathological and clinical findings and responsiveness to treatments after 36 months of follow-up. RESULTS: One insertion and 4 point mutations in exon 5 of p53 gene were found in 5 out of 28 (18%) ovarian cancer patients. There was no mutation in the paired blood samples. The histological types of the detected tumors were 3 endometrioids and 2 serous cystadenocarcinomas. All 5 patients were in stage I to IV disease and showed overall 4 out of 5 (80%) complete response until 36 months after surgery followed by chemotherapy, compared to 14 out of 28 (50%) of complete response in all cases of ovarian cancer. CONCLUSION: The authors found 5 cases of ovarian cancer patients with p53 gene mutations giving the same response to complete standard treatment as all cases. Significant factors affecting responsiveness of these patients depended more on stages, grades and histological cell types of the cancer.

**No. 342**

- Authors** : Nimkarn S, Likitmaskul S, Sangacharoenkit P, Pathomvanich A, Sawathiparnich P, Wacharasindhu S, Punnakanta L, Angsusingha K, Tuchinda C.  
**Title** : Ambiguous genitalia: an overview of 22 years experience and the diagnostic approach in the Pediatric Department, Siriraj Hospital.  
**Source** : Journal of the Medical Association of Thailand. 85:S496-505(Suppl 2), 2002 (Aug).  
**Keywords** : Ambiguous genitalia.  
**Abstract** : The newborn with abnormal genital development presents a difficult diagnostic and treatment challenge for the pediatrician providing care. It is important that a definitive diagnosis be determined as quickly as possible so that the appropriate treatment plan can be established to minimize medical, psychological and social complications. The purpose of this study was to provide an extensive review of the clinical characteristics of a patient cohort with ambiguous genitalia, from 22 years' experience in the Division of Endocrinology and Metabolism, Department of Pediatrics, Siriraj Hospital, and to classify them into diagnostic categories. Moreover, a cascade of diagnostic tools in approaching sexual ambiguity in the authors' institution, starting with history and physical examination and leading to further radiographic and laboratory investigations is demonstrated and can be adopted as a guideline for the clinical management of these disorders.

From 1979 to 2001, care was provided to a total of 109 patients with ambiguous genitalia, of whom 104 patients were reviewed. Among these individuals, 52 patients (50.0%) belonged to the diagnosis of female pseudohermaphroditism, 5 patients (4.8%) were in the true hermaphroditism group and the remaining 47 patients (45.2%) were in the male pseudohermaphroditism group. All female pseudohermaphrodites carried a diagnosis of congenital adrenal hyperplasia (CAH) and were reared as girls. 21 hydroxylase deficiency CAH accounted for all except one (98%) in this group. Among the 47 male pseudohermaphrodites, 9 (19.1%) had dysgenetic male pseudohermaphroditism, 7 (14.9%) had either testosterone biosynthetic defects or hCG unresponsiveness, 22 (46.8%) had either androgen insensitivity syndrome or 5 alpha-reductase deficiency, 4 (8.5%) had ambiguous genitalia in a 46,XY male associated with multiple anomalies and 5 (10.6%) had an unidentifiable cause. Sex reassignment occurred, not uncommonly, in 4 cases of female pseudohermaphrodites (7.7%) and at least 2 cases (3.9%) in the combined group of male pseudohermaphrodites and true hermaphrodites. The scope of the ambiguous genitalia problem is definitely not minor. An inappropriate approach to this problem poses an undue risk to the integrity of the physical and psychosexual health in the future for these children.

**No. 343**

- Authors** : Nitiyanant W, Tandhanand S, Mahtab H, Zhu XX, Pan CY, Raheja BS, Sathe SR, Soegondo S, Lim-Abraham MA, Lee WWR, Wijesuriya M, Tai TY, Chuang LM, Le HL, Cockram C, Jorgensen LN, Yeo JP.
- Title** : The Diabcare-Asia 1998 study - Outcomes on control and complications in type 1 and type 2 diabetic patients.
- Source** : Current Medical Research and Opinion. 18(5):317-327, 2002.
- Keywords** : Asia, Complications, Glycaemic Control, Metabolic Control, Type 1 Diabetes, Type 2 Diabetes.
- Abstract** : The aim of this study was to describe the glycaemic and metabolic control and diabetes-related complications in type 1 and type 2 Asian patients. Methods: Data of diabetes patients from 230 diabetes centres in 12 Asian regions were collected on a retrospective-prospective basis through review of medical records, interview and laboratory assessments. Analysis of glycated haemoglobin (HbA(1c)) was carried out in central laboratories appointed by Bio-Rad, The data collection case record forms were scanned electronically. Results: 22177 patients with valid data made up the analysis population. Among patients with type 1 and type 2 diabetes, there was a higher proportion of women than men (53% vs. 47% for type 1 patients and 56% vs. 44% for type 2 diabetes). Hypertension (61%) and overweight (40% with BMI greater than or equal to 25 kg/m(2)) were common in type 2 patients. Dyslipidaemia was also present in at least half of both types of patients. Control of glycaemia (mean HbA(1c) and fasting blood glucose [FBG]) was poor in type 1 (9.9 +/- 2.5%; 10.2 +/- 5.2 mmol/l) and type 2 patients (8.5 +/- 2.0%; 8.9 +/- 3.4 mmol/l). Glycaemia in the majority of both types of patients fell short of those stipulated by various guidelines. In type 2 patients, glycaemia deteriorated (HbA(1c) > 7.5%, FBG greater than or equal to 7.0 mmol/l) with duration of diabetes > 7 years. Both types of diabetes appear to share a similar high prevalence of complications of cataract, retinopathy and neuropathy, although the prevalence of cataract (27%) and neuropathy (35%) was higher in type 2 diabetes. Screening for microalbuminuria was not common. Conclusions: The inadequate metabolic and hypertension control, especially in type 2 patients, needs to be addressed.

**No. 344**

- Authors** : Norman PJ, Carrington CVF, Byng M, Maxwell LD, Curran MD, Stephens HAF, Chandanayingyong D, Verity DH, Hameed K, Ramdath DD, Vaughan RW.
- Title** : Natural killer cell immunoglobulin-like receptor (KIR) locus profiles in African and South Asian populations.
- Source** : Genes and Immunity. 3 (2):86-95, 2002.
- Keywords** : KIR frequencies, KIR haplotypes, KIR profiles, African, South Asian.
- Abstract** : Natural killer (NK) and some T cells express killer cell immunoglobulin-like receptors (KIRs), which interact with HLA class I expressed by target cells and consequently regulate cytolytic activity. The number of KIR loci can vary and so a range of genetic profiles is observed. We have determined the KIR genetic profiles from one African (n = 62) and two South Asian (n = 108, n = 78) populations. Several of the KIRs are present at significantly different frequencies between the two major ethnic groups (eg KIR2DS4 gene frequency 0.82 African, 0.47 S Asian. P-c < 1 x 10(-6)) and this is due to uneven distribution of two KIR haplotype families 'A' and 'B'. All three populations described here displayed a greater degree of diversity of KIR genetic profiles than other populations investigated, which indicates further complexity of underlying haplotypes; in this respect we describe two individuals who appear homozygous for a large deletion including the previously ubiquitous 2DL4. We have also reanalysed three populations that we studied previously, for the presence of a KIR which is now known to be an indicator of the 'B' haplotype. South Asians had the highest overall frequencies of all KIR loci characteristic of 'B' haplotypes (P-c < 0.0001 to < 0.004). Furthermore, gene frequency independent deviances in the linkage disequilibrium were apparent between populations.

**No. 345**

- Authors** : Nuntnarumit P. Korones SB. Yang W. Bada HS.
- Title** : Efficacy and safety of tolazoline for treatment of severe hypoxemia in extremely preterm infants.
- Source** : Pediatrics. 109(5):852-6, 2002(May).
- Keywords** : Tolazoline, Severe Hypoxemia, Preterm Infants.
- Abstract** : OBJECTIVE: To determine the efficacy of tolazoline as a rescue treatment for hypoxemia in preterm infants with respiratory distress syndrome. METHODS: Retrospective chart review on case series of infants weighing < 750 g at birth who received tolazoline during a severe hypoxemic episode while receiving maximal ventilator support for respiratory distress syndrome. A slow bolus infusion of low dose tolazoline (0.5 mg-2 mg/kg) mixed with plasmanate or normal saline (10 mL/kg) was administered. Outcome measures evaluated included an increase in PaO(2) > or =20 mm Hg from pretreatment value and an increase in oxygen saturation to > or =90%. RESULTS: Forty-three infants with a mean gestational age and birth weight of 24 weeks and 581 g, respectively, received tolazoline. All infants were mechanically ventilated and required a fraction of inspired oxygen of 1.0. Oxygenation improved in 72% (31/43) of infants with a tolazoline dose of 0.5 to 1.0 mg/kg. Of those who responded, PaO(2) values (mean +/- standard deviation) pretolazoline and posttolazoline were 32 +/- 7.5 mm Hg and 156 +/- 114.9 mm Hg, respectively. In all responders, oxygen saturation increased to > or =90% within 30 minutes of tolazoline administration. Improvement in pH, pCO(2), oxygenation index, and mean airway pressure was also noted. Among nonresponders, pH decreased and pCO(2) increased after tolazoline. Minimal change in blood pressure was noted in both responders and nonresponders. Heart rate decreased by 19 beats

per minute among nonresponders compared with an increase of 3 beats per minute in those who responded to tolazoline. CONCLUSION: Tolazoline is an effective treatment of severe resistant hypoxemia in preterm infants who are already on vigorous ventilatory support.

**No. 346**

- Authors** : O-Charoenrat P, Rhys-Evans P, Eccles S.  
**Title** : A synthetic matrix metalloproteinase inhibitor prevents squamous carcinoma cell proliferation by interfering with epidermal growth factor receptor autocrine loops.  
**Source** : International Journal of Cancer. 100(5):527-533, 2002.  
**Keywords** : Autocrine Growth, C-ErbB Receptors, Epidermal Growth Factor Receptor, Head And Neck Cancer, Matrix Metalloproteinase.  
**Abstract** : Head and neck squamous cell carcinoma (HNSCC) is characterized by its capacity to invade adjacent tissues and to metastasize locoregionally. Evidence suggests that matrix metalloproteinases (MMPs) may play a causal role in HNSCC progression. While evaluating the role of MMPs in the invasion process, we made the surprising observation that a broad-spectrum MMP inhibitor, (marimastat, BB2516), inhibited the growth in vitro of some HNSCC cell lines. This inhibitory effect was only found in HNSCC cell lines overexpressing epidermal growth factor receptors. The effects of the MMP inhibitor could be reversed by adding exogenous c-erbB ligands, suggesting that the phenomenon may be related to autocrine ligand processing. This hypothesis was supported by the finding that the growth-inhibitory effect of marimastat was directly related to its ability to prevent the release of major c-erbB ligands including transforming growth factor- $\alpha$ , betacellulin and heregulin P I from HNSCC. Marimastat was also found to potentiate the cytotoxic effects of cisplatin both in vitro and in vivo. Our results indicate that the cleavage of several c-erbB ligands from membrane-anchored precursors requires MMP activity. We conclude that MMP inhibitors could prevent tumor progression not only by inhibiting invasion and angiogenesis, as previously shown, but also by their ability to inhibit autocrine signaling through the c-erbB receptors. Clinical trials to test this hypothesis in HNSCC should be considered.

**No. 347**

- Authors** : O-charoenrat P, Rhys-Evans PH, Modjtahedi H, Eccles SA.  
**Title** : The role of c-erbB receptors and ligands in head and neck squamous cell Carcinoma.  
**Source** : Oral Oncology. 38 (7):627-640, 2002.  
**Keywords** : C-ErbB Receptors, Epidermal Growth Factor Receptor, Head And Neck Cancer, Matrix Metalloproteinase, Squamous Cell Carcinoma, Vascular Endothelial Growth Factor.  
**Abstract** : c-erbB receptor signalling induces pleiotropic responses and influences several biological functions involved in the pathogenesis and progression of HNSCC. Aberrant expression of multiple c-erbB receptors and ligands is frequently observed in tumour cells. EGFR appears to be a dominant factor controlling the malignant phenotype in HNSCC at least in part via regulation of molecules involved in invasive and angio-/lymphangiogenic processes. Although c-erbB-2 is an orphan receptor, the formation of heterodimer complexes appears to be an important mechanism for inter-receptor activation and synergistic signal transduction. The roles of c-erbB-3 and c-erbB-4 in HNSCC progression are less clear. However, their ability to form heterodimers with other c-erbB family members enhances proliferation and

invasion in HNSCC cells. At least two major downstream signalling pathways, MAPK and PI3K, are involved in the transcriptional regulation of proteases and cytokines implicated in invasion and angiogenesis. Studies using clinical specimens confirmed experimental data that co-operative signalling of c-erbB receptors may play a significant role in the pathogenesis of HNSCC. Most therapeutic studies in HNSCC so far have focused on the strategies targeting of EGFR. Due to the complexity of the system both at the receptor and ligand levels and the integrated biological functions of the c-erbB family in HNSCC, the effect of combined c-erbB blockade (or their downstream signalling pathways) on HNSCC progression should be explored.

**No. 348**

**Authors** : Ogun SA, Oluwole O, Fatade B, Ogunseyinde AO, Ojini FI, Odusote KA.

**Title** : Comparison of Siriraj Stroke Score and the WHO criteria in the clinical classification of stroke subtypes.

**Source** : Afr J Med Med Sci. 31(1):13-6, 2002(Mar).

**Keywords** : Stroke score, Cerebral haemorrhage, Computerised tomography.

**Abstract** : Clinical distinction between cerebral haemorrhage (CH) and cerebral infarction (CI) is important in the management of stroke patients in areas where CT scan facility is lacking or access limited by cost and distance. This distinction is necessary in our environment where an increasing proportion of patients are suspected to have haemorrhagic stroke. This study compares Siriraj stroke score (SSS) and the WHO criteria for the acute stroke syndrome as simple tools for this purpose. The computerised tomography (CT) brain scans of all patients referred with clinical diagnosis of stroke at the University College Hospital (UCH), Ibadan, and RADMED diagnostic centre. Lagos were retrieved and reviewed as well as the case notes of these patients at the referral hospitals. Relevant clinical data were extracted from the case records. The patients were classified into either CI or CH using the WHO criteria for acute stroke syndrome and the SSS. This classification was compared with the CT scan diagnosis using the latter as the gold standard. Data analysis was performed with Epi-info software, and Kappa statistics (k value) for comparability test with 95% confidence interval was used to compare the two clinical criteria with the gold standard. Ninety-six patients had complete clinical records and CT scan features consistent with the diagnosis of stroke, of which 52 were diagnosed as CI and 44 as CH. SSS had sensitivity of 50% for haemorrhage and 58% for infarction with an overall accuracy of 54.2%. The WHO criteria for the acute stroke syndrome had sensitivity of 73% for haemorrhage and 69% for infarction with an overall accuracy of 71%. The kappa coefficient was 0.18 for the SSS and 0.41 for the WHO criteria. The diagnostic accuracy of the WHO criteria for the acute stroke syndrome is higher than that of the Siriraj stroke score. The WHO criteria showed moderate agreement (k=0.41) with the CT scan, while the SSS showed no agreement (k=0.18). When CT scan is not affordable or its use is limited by distance, the WHO criteria for acute stroke syndrome could be more useful. A prospective study with a larger sample size is suggested for definitive conclusion.

**No. 349 (865)**

- Authors** : Omi K, Ohashi J, Patarapotikul J, Hananantachai H, Naka I, Looareesuwan S, Tokunaga K  
**Title** : CD36 as a candidate gene predisposing to severe malaria: polymorphism screening and association with cerebral malaria.  
**Source** : American Journal of Human Genetics. 71(4):1144(Suppl. S) , 2002.  
**Keywords** : CD36, Malaria, Polymorphism Screening, Cerebral Malaria.

**No. 350 (137)**

- Authors** : Ongtengco I, Morales D, Sanderson J, Lu ZR, Beilin LJ, Burke V, Puddey IB, Tanomsup S, Dayi H, Rahardjo P, Zambahari DR, Chen CY, Soenarta AA, Buranakitjaroen P, Tan C, Soon TK, Wu DJ.  
**Title** : Persistence of the antihypertensive efficacy of amlodipine and nifedipine GITS after two 'missed doses': a randomised, double-blind comparative trial in Asian patients.  
**Source** : Journal of Human Hypertension. 16(11):805-813, 2002.  
**Keywords** : Amlodipine, Nifedipine Gits, Essential Hypertension, Efficacy, Medication Compliance, Missed Doses.  
**Abstract** : Suboptimal management of hypertension is often a result of poor patient compliance in the form of missed doses of their antihypertensive medication. This multicentre, randomised, double-blind, parallel-group trial was designed to compare the persistence of the antihypertensive efficacy of the amlodipine and nifedipine gastrointestinal therapeutic system (GITS) after two, missed doses', and also to compare the drugs' overall efficacy and safety in Asian patients with mild-to-moderate essential hypertension. Following a 2-week placebo run-in period, 222 patients were randomised to receive either amlodipine (5 mg daily, increased after 6 weeks if necessary to 10 mg daily, n = 109) or nifedipine GITS (30 mg daily, increased after 6 weeks if necessary to 60 mg daily; n = 113) for 12 weeks. A placebo was then substituted for further 2 days with continuous ambulatory blood pressure (BP) monitoring. The increases in the last 9h of mean ambulatory BP on day 2 after treatment withdrawal were significantly less with amlodipine than with nifedipine GITS: 4.4+/-7.0 vs 11.2+/-11.3mmHg for systolic BP (Pless than or equal to0.0001) and 2.4+/-6.3 vs 6.0+/-6.0 mmHg for diastolic BP (Pless than or equal to0.0002). Significant differences between the two drugs in mean 24-h ambulatory BP levels were already evident on day 1 after withdrawal, even though there were no significant differences on the final day of treatment. No differences in safety parameters were observed, and neither drug caused any serious or severe treatment-related adverse events. In conclusion, amlodipine provides greater protection than nifedipine GITS against loss of BP control following missed doses.

**No. 351**

- Authors** : Opartkiattikul N. Bejrachandra S.  
**Title** : The external quality assessment schemes in Thailand.  
**Source** : Rinsho Byori-Japanese Journal of Clinical Pathology. 50(2):121-5, 2002(Feb).  
**Keywords** : External Quality Assessment Schemes.  
**Abstract** : In Thailand, the external quality assessment schemes have been organized by 2 main institutions:--The Department of Medical Science, Ministry of Public Health and The Faculty of Medical Technology, Mahidol University. Both schemes were initiated simultaneously by WHO experts in 1973. The Department of Medical Science, Ministry of Public Health established a Unit of Laboratory Quality Standards to be responsible for external quality control for clinical

laboratory services. In 1996 the unit was upgraded to become The Bureau of Laboratory Quality Standards and is responsible for The National Proficiency Testing Scheme (NPTS). This includes hematology, clinical chemistry, clinical immunology, clinical microscopy, clinical microbiology and blood banking. Every laboratory is invited to be a member, free of charge. Now there are almost 800 out of 1300 laboratories all over Thailand participating in this NPTS. The proficiency testing samples are sent to the participants 3-4 times/year. The results of laboratory tests performed by participants are evaluated by using target values for every scheme, except clinical chemistry, which use participants' consensus. The control materials used in the clinical chemistry, hematology and immunology schemes are imported from abroad. The remaining control materials are prepared in house. The Faculty of Medical Technology, Mahidol University has organized 4 programs in The External Quality Assurance Scheme (EQAS):--clinical chemistry, clinical hormone, clinical microscopy and clinical immunology and serology. The first scheme was established in 1986 and the remaining schemes were established in 1999. All the control materials used are prepared in house. The members of this EQAS have to pay a membership fee. The control samples are sent to the participants 4-12 times/year. The results of laboratory tests are evaluated by using participants' consensus. There are 150-460 laboratories enrolled in this EQAS. At this time, Thailand is very conscious of quality in every field, including hospitals, and internal and external quality controls are one of the recommendations of the quality standard. So both The NPTS and The EQAS mentioned above are very important for each laboratory at the moment. The author sent questionnaires to 200 laboratories asking whether they were enrolled in an external quality assessment scheme. Fifty-seven laboratories responded and over 70% of them had joined either The NPTS or The EQAS and some of them had joined both. In addition, there are 2 new programs of external quality control:--the external quality control in red cell serology and the external quality assessment of hematology laboratory which have been established recently. However, there are still some types of laboratory that have no external quality assessment programs e.g. coagulation, serology for autoimmune disease and hemoglobin typing. External quality assessment programs for these laboratories are urgently needed.

**No. 352**

- Authors** : Opartkiattikul N, Wongtiraporn W, Tientadakul P, Rungpitarungsi B.  
**Title** : Application of indicators for quality improvement in the coagulation laboratory.  
**Source** : Southeast Asian J Trop Med Public Health. 33:131-5(Suppl 2), 2002.  
**Keywords** : Indicators, Quality improvement  
**Abstract** : Indicators are tools that measure work performance and serve as a guide to improve the quality of laboratories. Seven Indicators for quality improvement have been established in our coagulation laboratory. They are :- 1). percentage of pre-analytical problems, 2). personnel competency scores, 3). results of external quality assessment, 4). % coefficient of variation (CV) of control materials, 5). unit cost, 6). percentage of reports within determined time, and 7). percentage of customers who were satisfied. The percentage of preanalytical error gradually decreased from 1.8% in April 2001 to 0.8% in June 2001 as a result of co-operation between the coagulation laboratory and the wards. Since there is no system to check personnel competency at a national level in Thailand, we set up a program for testing personnel competency in our department by asking every technician to take a written and practical laboratory examination. The scores achieved by our personnel ranged from 40 to 90%. For those who achieved scores of lower than 70%, we limited

their responsibilities and organized a training program for them. In order to check our laboratory's accuracy, we are enrolled in the WHO International External Quality Assessment Scheme (IEQAS) in Blood Coagulation and have been since 1987. The survey results indicated that most of our laboratory tests were within consensus including our homemade ELISA tests for protein C, protein S and vWF antigen. The percent CVs of control materials used for the internal daily control for every test were analyzed. They ranged from 2.3 for normal APTT to 11.4 for the low level of free protein S in plasma. The unit cost for each test was analyzed to determine the cost-effectiveness of the laboratory. We set the goal for the turn around time for emergency coagulation tests to be within an hour and the percentage of reports within this time was 91.6% in August 2001. The last indicator was the percentage of satisfied customers, which gave an indication of the quality of all Out Patient Department (OPD) services performed by our department. We sent 400 questionnaires to doctors, nurses and patients in OPD asking their opinion of both the technical services and the behavior of our technicians. The percentage satisfaction of our customers concerning services offered to OPD was lower than 50%. We plan to improve the last 2 indicators by expanding the space of the OPD/emergency laboratory and reorganizing the service system. All indicators mentioned above have helped to improve the quality of our laboratory greatly.

**No. 353**

- Authors** : Osangthamnont C, Manatsathit S, Pongprasopchai S, Viriyataveekul R, Chaihirunkarn S, Leelakusolvong S, Boonyapisit S.
- Title** : Antibodies to neutrophil cytoplasmic antibodies in patients with ulcerative colitis and their first-degree relatives in Thailand.
- Source** : Journal of Gastroenterology and Hepatology. 16 (8):866-871, 2001.
- Keywords** : Antibodies, Antineutrophil Cytoplasmic/Bleed, Asian, Colitis, Inflammatory Bowel Disease/Immunology, Prevalence, Ulcerative.
- Abstract** : Background: The prevalence of perinuclear antineutrophil cytoplasmic antibodies (p-ANCA) does not significantly vary in ethnically diverse populations. The prevalence of p-ANCA is high in ulcerative colitis and primary sclerosing cholangitis. While the prevalence of ulcerative colitis in Asian populations is low, it is interesting to know the prevalence of p-ANCA in such a population. Methods: Sera from 33 cases of ulcerative colitis diagnosed during the last 10 years at the diarrhea clinic, Division of Gastroenterology, Siriraj Hospital, were prospectively compared with case controls consisting of 15 cases of diarrhea from non-inflammatory bowel diseases and 25 non-diarrheic patients. Indirect immunofluorescence assay was used to detect p-ANCA in all the sera. Results: Positive p-ANCA tests were found in 13 of the 33 patients with ulcerative colitis and in one of the 40 controls. Sensitivity of the test was 39.4% and the specificity was 97.5%. The one patient with positive p-ANCA in the control group was the patient with irritable bowel syndrome. Of the 13 p-ANCA-positive ulcerative colitis patients, two cases were found to have proctosigmoiditis, seven cases had left-sided colitis, and four cases had pancolitis. Perinuclear antineutrophil cytoplasmic antibodies was one of the 22 cases of first-degree relatives of ulcerative colitis patients (22 relatives from 12 index ulcerative colitis cases). There was no correlation between the positivity of p-ANCA and disease activity, and extent of the disease. Conclusion: The prevalence of p-ANCA in Thai patients with ulcerative colitis (39.4%) is lower than that in the Western population. Although the prevalence of p-ANCA is low in the Thai population, it should serve as a useful tool in diagnosing ulcerative colitis in

this part of the world where the disease is uncommon and difficult to diagnose. The negativity of p-ANCA in almost all first-degree relatives of Thai ulcerative colitis patients should be further elucidated.

**No. 354**

- Authors** : Padungsutt P.  
**Title** : High dose cisplatin/mitomycin C plus amifostine as a neoadjuvant chemotherapy in squamous cell carcinoma of the cervix stage IB2-IIB.  
**Source** : International Journal of Cancer. 381-382(Suppl. 13), 2002.  
**Keywords** : Mitomycin C, Chemotherapy, Carcinoma, Cervix Stage IB2-IIB.

**No. 355**

- Authors** : Page J, Heller RF, Kinlay S, Lim LLY, Qian W, Zheng SP, Kongpatanakul S, Akhtar M, Khedr S, Macharia W.  
**Title** : Attitudes of developing world physicians to where medical research is performed and reported.  
**Source** : BMC Public Health. 3:6 (Art), 2003.  
**Keywords** : Implementing Research Findings, Developing-Countries, Clinical-Trials.  
**Abstract** : Background : Little is known about the influence of the site of research or publication on the impact of the research findings on clinical practice, particularly in developing countries. The International Clinical Epidemiology Network ( INCLIN) is dedicated to improving the quality of health research in the Developing World through institutional capacity building for evidence based medicine, and provided the opportunity to examine the likely impact of research location and journal location on physicians' practice in a number of the participating countries. Methods: Physicians from secondary and tertiary hospitals in six cities located in China, Thailand, India, Egypt and Kenya were enrolled in a cross-sectional questionnaire survey. The primary outcome measures were scores on a Likert scale reflecting stated likelihood of changing clinical practice depending on the source of the research or its publication. Results: Overall, local research and publications were most likely to effect change in clinical practice, followed by North American, European and regional research/publications respectively, although there were significant variations between countries. The impact of local and regional research would be greater if the perceived research quality improved in those settings. Conclusion: Conducting high quality local research is likely to be an effective way of getting research findings into practice in developing countries.

**No. 356**

- Authors** : Panyavudhikrai S, Danchaivijitr S, Vantanasiri C, Trakulsomboon S, Kolatat T, Dhiraputra C, Poomsuwan V, Srihapol N.  
**Title** : Antiseptics for preventing omphalitis.  
**Source** : Journal of the Medical Association of Thailand. 85(2):229-34, 2002(Feb).  
**Keywords** : Antiseptics, Omphalitis.  
**Abstract** : BACKGROUND: Omphalitis may cause serious complications and contribute to neonatal morbidity and mortality. From January 1997 to August 1998, the incidence of omphalitis in the Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital had been increased from 0.9 to 17.4 per 1,000 live births. A prospective randomized trial using antiseptic applied directly to the umbilical stump was conducted aiming to reduce an epidemic outbreak of omphalitis in the newborn nursery. OBJECTIVE: To determine which antiseptic is appropriate for preventing omphalitis in the newborn infants. PATIENTS

AND METHOD: Newborn infants delivered in the Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital were randomized into group A (Triple dye) or group B (70% Alcohol). The infant with omphalitis was assessed by a pediatrician or a neonatology fellow. At home, the same antiseptic will be continually applied to the umbilical stump daily until a few days after cord detachment. Relative risk was calculated and statistical significance was tested by Chi-square test. RESULTS: Four hundred and twenty-seven infants were enrolled. Birth weight, gestational age and gender of the infants in both groups were not different. There were no known maternal risk factors for omphalitis. Omphalitis was observed in 9/213 (4.2%) infants in group A and 23/214 (10.7%) infants in group B. The relative incidence rate between each group was statistically significant ( $p < 0.01$ ). Triple dye group was 60 per cent less likely to develop omphalitis compared to 70 per cent Alcohol group (RR 0.39, 95% CI: 0.19-0.83). The mean duration for cord detachment were 13.6 and 11.5 days in group A and group B, respectively. CONCLUSION: During an epidemic outbreak of omphalitis, Triple dye was the most appropriate and effective antiseptic to prevent omphalitis but could delay cord separation.

**No. 357 (960)**

**Authors** : Pattanapanyasat K, Noulsri E, Lerdwana S, Siritanaratkul N, Fucharoen S.  
**Title** : Flow cytometric quantitation of red blood cell vesicles in thalassemia patients  
**Source** : Cytometry. 42 (Suppl. 11), 2002.  
**Keywords** : Flow Cytometric, Red Blood Cell, Thalassemia.

**No. 358**

**Authors** : Pattaranutaporn P, Chansilpa Y, Ieumwananonthachai N, Kakanaporn C, Onnomdee K, Mungkung N, Santisiri R.  
**Title** : Three-dimensional conformal radiation therapy and periodic irradiation with the deep inspiration breath-hold technique for hepatocellular carcinoma.  
**Source** : Journal of the Medical Association of Thailand. 84(12):1692-700, 2001(Dec).  
**Keywords** : 3D-conformal radiation therapy, Primary hepatocellular carcinoma.  
**Abstract** : Nine cases of primary hepatocellular carcinoma were treated with 3D-conformal radiation therapy using computerized planning system. This technique permits the precise delivery of a high dose of radiation to the target while sparing most of the normal liver tissue. In order to decrease the effect of organ movement related to respiration, periodical irradiation was combined with the deep inspiration breath-hold technique. The radiation dose was equivalent to conventional radiation with a total dose of 50-70 Gy with 2 Gy, 5 times a week. Irradiation was given in 1-10 fractions which encompassed the target with 90 per cent isodose line. The patients tolerated the treatment procedure well without any complications inherent to the technique. The tumors were decreased in size, the pain symptom and abdominal discomfort were relieved for 3-20 months. This technique is an effective and safe treatment for palliation in hepatocellular carcinoma especially in locally advanced stages with large or multiple lesions. However, long term follow-up should be done to evaluate the late radiation effect and clinical outcome.

**No. 359**

- Authors** : Pattaranutaporn P, Chansilpa Y, Ieumwananonthachai N, Thephamongkhol K.  
**Title** : Two-year results of phase II concurrent gemcitabine and radiotherapy for stage IIIb cervical carcinoma.  
**Source** : International Journal of Cancer. 459-460(Suppl. 13), 2002.  
**Keywords** : Gemcitabine, Radiotherapy, Cervical Carcinoma.

**No. 360 (869)**

- Authors** : Petmitr S, Nuchfaong S, Chaksangchaichot P, Pongstaporn W, Sutinont P, Limsila T, Punyarit P.  
**Title** : Microsatellite alterations in non-small cell lung cancer.  
**Source** : Journal of Experimental and Clinical Cancer Research. 21(1):31-5, 2002.  
**Keywords** : Microsatellite Alterations, Lung Cancer.  
**Abstract** : Genetic alterations at 12 dinucleotide repeat loci located on human chromosomes 2, 3, 12, and 17 have been analyzed in non-small cell lung cancer from Thai patients. Seventeen out of 30 cases (57%) harbored the microsatellite alterations. Of the 30 cases, 19 patients had a history of tobacco smoking, of whom 14 (74%) were in the group with microsatellite alterations, whereas 3 out of 11 non-smokers (26%) had these alterations. The frequency of microsatellite alterations among smokers was significantly higher than it was in non-smokers ( $P = 0.01$  Fisher's exact test; odds ratio; 7.47).

**No. 361**

- Authors** : Phankingthongkum R, Chotinaiwattarakul C, Panchavinnin P, Tresukosol D, Jakrapanichakul D, Sahasakul Y, Kaeokam-Aim S.  
**Title** : Efficacy and safety of percutaneous metallic mitral valvuloplasty in rheumatic mitral stenosis at Siriraj Hospital.  
**Source** : Journal of the Medical Association of Thailand. 85(4):405-15, 2002(Apr).  
**Keywords** : Rheumatic Mitral Stenosis, Mitral Stenosis.  
**Abstract** : Mitral stenosis is an important problem that leads to heart failure and stroke in Thailand. The options of treatment at present are either surgical or balloon mitral commissurotomy. However, the cost of balloon is very expensive. To reduce the expense of the procedure, the authors prospectively did a study using a new device called the metallic valvulotome in symptomatic severe mitral stenosis to assess the safety, feasibility and immediate outcomes. Fifty-seven patients were included in the study. The successful outcome achieved by the metallic valvulotome was 96.2 per cent in patients in whom the procedure was actually performed. The mean transmitral gradient, left atrial pressure and pulmonary artery pressure were significantly decreased and the mitral valve area was also significantly increased. Three cases failed the procedure due to inappropriate position of the septal puncture. No death occurred in the study and complications of the procedure included only two cases of hemopericardium. In the future, it is believed that this new innovative device will provide improvement and reduce the cost of the procedure in patients with severe mitral stenosis.

**No. 362**

- Authors** : Phankingthongkum S, Daengsuwan T, Visitsunthorn N, Thamlikitkul V, Udompunthuruk S, Vichyanond P.
- Title** : How do Thai children and adolescents describe asthma symptoms?.
- Source** : Pediatric Allergy and Immunology. 13(2):119-24, 2002(Apr).
- Keywords** : Children, Adolescents, Asthma Symptoms.
- Abstract** : Prevalence of childhood asthma appears to be increasing worldwide. In Thailand, the prevalence of childhood asthma increased from 4.2% to 13% within the past decade. The last epidemiologic survey in Thailand utilized the International Study of Asthma and Allergies in Childhood (ISAAC) phase I questionnaire translated into Thai language. Language in the questionnaire can affect the reliability and validity of results of the survey. The purpose of this study is to determine common Thai wordings actually used by Thai children and adolescents to describe wheeze, chest tightness, shortness of breath and dyspnea. Sixty asthmatic Thai children, aged 9.2-18 years with asthmatic attacks less than 1 yr prior to the study, and 178 age-matched controls were recruited into the study. Asthmatic children spontaneously expressed their terms describing their asthma symptoms (in Thai) and then answered a preoutlined questionnaire regarding asthma terminology during an interview session after viewing the severe attack scene of the International ISAAC video questionnaire. Controls responded only to the preoutlined questionnaire after viewing the video scene. Of the 60 asthmatic children (38 males and 22 females, mean age 11.9 yr), 75% had their last asthmatic attacks within 2 months prior to the study. Wheeze was referred to as " and '/wi:d/' in 50% and 33% of patients, respectively, and " in 93.8% among controls. Using only the word '/wi:d/' in our previous ISAAC-I survey, as it sounded like the English word 'wheeze', it appears that up to 67% of the cases could have been missed. Dyspnea was referred to as rapid breathing and feeling tired in 78.2% of cases and as rapid and difficult breathing in 76.3% of controls. Chest tightness was referred to as chest discomfort in 65.7%. Shortness of breath was referred to as not being able to catch a breath, too short a breath, not enough breath and feeling suffocated in 88.8%. Local terms for asthma symptoms should be established and validated into each language to obtain reliable epidemiologic data.

**No. 363**

- Authors** : Phankingthongkum S, Visitsunthorn N, Vichyanond P
- Title** : IgA deficiency: A report of three cases from Thailand.
- Source** : Asian Pacific Journal of Allergy and Immunology. 20(3):203-7, 2002.
- Keywords** : Subclass Deficiency, Blood-Donors, Children, Abnormalities, Recurrent, Arthritis, Frequency.
- Abstract** : Selective IgA deficiency has been reported to be the most common primary immunodeficiency disease in Western countries. A markedly lower frequency of this condition has been reported in the Japanese population. While most of the IgA deficient cases are healthy, some patients develop significant recurrent sinopulmonary infections, allergic disorders and autoimmune diseases. Herein, we report three cases of IgA deficiency among Thai patients, all of whom suffered from chronic sinopulmonary infections. Two of the three patients had absolute IgA deficiency while the third had a partial IgA deficiency. The associated conditions found in these three patients were deficiencies of an IgG subclass, allergic rhinitis and lupus nephritis. The youngest child (5 years old boy with lupus nephritis) expired from Pneumocystis carinii pneumonia complicated with adult respiratory distress syndrome.

**No. 364**

- Authors** : Phongsamart G, Vichyanond P.  
**Title** : The evaluation of clinical asthma score for outpatient management of childhood asthma in Siriraj Hospital.  
**Source** : Journal of Allergy and Clinical Immunology. 109(1):248 (Suppl. S), 2002.  
**Keywords** : Clinical Asthma Score, Asthma.

**No. 365**

- Authors** : Phongsamart G, Wertsch JJ, Ferdjallah M, King JC, Foster DT.  
**Title** : Effect of reference electrode position on the compound muscle action potential (CMAP) onset latency.  
**Source** : Muscle and Nerve. 25(6):816-821, 2002.  
**Keywords** : CMAP Latency, Median Nerve, Nerve Conduction Studies, Reference Electrode, Ulnar Nerve, Compound Muscle Action Potential, Nerve Conduction Studies.  
**Abstract** : Compound muscle action potential (CMAP) onset latency is interpreted to reflect the arrival time at the muscle of impulses in the fastest-conducting motor nerve fiber. However, we have observed that the position of the reference or indifferent electrode (E2) affects CMAP onset latency. Motor nerve conduction studies (NCS) of the median, ulnar, and deep ulnar motor (DUM) nerves on 20 normal hands were performed using both traditional bipolar and experimental monopolar (referenced to the contralateral hand) montages. As the position of E2 was altered, the CMAP onset latency varied 0.1-0.5 ms for the median NCS, 0.1-0.3 ms for the ulnar NCS, and 0.1-1.5 ms for the DUM NCS. This study demonstrates that E2 recorded potentials are significant and vary with positioning, affecting motor onset latency. This has implications both for reference values and the physiologic interpretation of the CMAP waveform.

**No. 366 (701)**

- Authors** : Piyachaturawat P, Srivoraphan P, Chuncharunee A, Komaratat P, Suksamrarn A.  
**Title** : Cholesterol lowering effects of a choleric phloracetophenone in hypercholesterolemic hamsters.  
**Source** : European Journal of Pharmacology. 439:141-8, 2002.  
**Keywords** : Bile acid, Cholesterol, Cholesterol 7 $\alpha$ -hydroxylase, Curcuma comosa, Phloracetophenone.  
**Abstract** : The plasma cholesterol-lowering effect and mechanism thereof of a choleric phloracetophenone or 2,4,6-trihydroxyacetophenone (THA) were investigated in hypercholesterolemic male hamsters. Intra-gastric administration of THA (300–600  $\mu$ mol/kg) twice a day for 7 days to these animals caused a dose- and time-dependent decrease in both plasma cholesterol and triglyceride levels. THA at a dose of 400  $\mu$ mol/kg reduced the cholesterol and triglyceride levels in plasma to 52% and 25% of the level in corresponding cholesterol-fed controls, respectively, with decreases in both plasma very low density lipoprotein and low density lipoprotein cholesterol but not in high density lipoprotein cholesterol. THA did not significantly alter total hepatic cholesterol content but significantly increased the excretion of both bile acids and cholesterol into the intestinal lumen for elimination. Corresponding to the increase in bile acid excretion, THA caused a seven-fold increase in hepatic cholesterol 7 $\alpha$ -hydroxylase activity. These results suggest that THA exerts its cholesterol lowering effect by increasing hepatic cholesterol 7 $\alpha$ -hydroxylase activity which increases hepatic conversion of cholesterol to bile acid for disposal via biliary secretion.

This compound may have a potential for future development as a therapeutic agent for lowering lipids in hypercholesterolemic patients.

**No. 367 (702)**

- Authors** : Piyachaturawat P, Tubtim C, Chuncharunee A, Komaratat P, Suksamrarn A.  
**Title** : Evaluation of the acute and subacute toxicity of a choleric phloracetophenone in experimental animals.  
**Source** : Toxicology Letters. 129(1-2):123-32, 2002(Mar 24).  
**Keywords** : Toxicity, Choleric Compound, Phloracetophenone.  
**Abstract** : Toxicity of a choleric compound, phloracetophenone (2,4,6-trihydroxyacetophenone; THA) was investigated in mice, rats and hamsters. Acute toxicity of THA was observed to be dependent on species and route of administration, but not sex and age. LD(50) values for an acute toxicity of a single i.p. administration to adult male hamsters and mice were 338 and 365 mg/kg BW, respectively. It was significantly increased to 489 mg/kg BW in adult male rats and greatly increased by i.g. route. Subacute toxicity was investigated in adult male mice by giving THA at a doses of 37-300 mg/kg BW/day, i.g. for 30 consecutive days. High doses of THA induced periportal hepatocyte degeneration whereas plasma concentrations of alanine and aspartate aminotransferases, bilirubin, and blood urea nitrogen, and hepatic triglyceride content were only slightly increased. The possible therapeutic effect of the choleric THA was evaluated in the ethinylestradiol (EE)-induced cholestasis. THA enhanced the hepatic clearance of sulfobromophthalein and decreased the elevated plasma alkaline phosphatase in EE-cholestatic rats to control levels. These results suggested that THA at biologically active choleric dose had low toxicity, it might be safe for further development as a therapeutic agent for a short period of treatment in cholestasis.

**No. 368**

- Authors** : Piyophrapong S, Linpiyawan R, Mahaisavariya P, Muanprasat C, Chaiprasert A, Suthipinittharm P.  
**Title** : Cutaneous protothecosis in an AIDS patient.  
**Source** : British Journal of Dermatology. 146(4):713-15, 2002.  
**Keywords** : Therapy.

**No. 369**

- Authors** : Pongrapeeporn K, Leowattana W, Nuchpramool W, Kerdsang K, Thepsuriyanon P, Kiartivich S, Yamwong P, Ong-Ajyooth S, Amornrattana A, Kasemsuk L, Laungsuwan S, Sribhen K.  
**Title** : Screening for mutations in exons encoding the ligand-binding domain of the LDL receptor gene using PCR-CFLP and PCR-SSCP.  
**Source** : Journal of the Medical Association of Thailand. 84:S619-27(Suppl.3), 2001(Dec).  
**Keywords** : PCR-CFLP, PCR-SSCP, LDL receptor gene  
**Abstract** : Primary hypercholesterolemia includes both monogenic disorders and polygenic conditions. Two well defined monogenic disorders are familial hypercholesterolemia (FH) and familial defective apolipoprotein (apo) B-100 (FDB). Both disorders convey high risk of premature coronary artery disease. FH and FDB are caused by mutations in LDL receptor and apo B-100 genes, respectively. In the present study, mutations in both genes in Thai subjects with primary hypercholesterolemia were screened. For apo B-100 gene, a common mutation R3500Q was screened. This mutation was not observed in the patients (n = 45). For LDL receptor gene, mutations in the exons encoding the ligand-binding domain were screened. By PCR-CFLP analysis, 18 abnormal CFLP patterns in exon 4, the hot spot

for mutations, were found in patients (n=45). One of the DNA samples with abnormal CFLP patterns was previously identified and reported as a possible disease-causing mutation, namely D151Y. For the other exons, the screening technique was PCR-SSCP. Abnormal SSCP patterns in DNA samples from patients (n=20) were found as follows, two in exon 3, one in exon 5 and another one in exon 6. Further characterization by DNA sequencing and family studies for these abnormal patterns are underway.

**No. 370**

- Authors** : Pongrapeeporn K, Yamwong P, Nuchpramool W, Sribhen K, Thepsuriyanon P, Leowattana W, Ong-Ajyooth S.
- Title** : Homozygous DNA variants in exon 9 of the LDL receptor gene in a Thai patient with primary hypercholesterolemia phenotype.
- Source** : Journal of the Medical Association of Thailand. 84:S690-5(Suppl.3), 2001(Dec).
- Keywords** : Low density lipoprotein, Familial hypercholesterolemia, PCR-RFLP.
- Abstract** : Mutation in low density lipoprotein (LDL) receptor gene causes an inherited primary hypercholesterolemia namely familial hypercholesterolemia (FH). In this study, 46 Thai patients with primary hypercholesterolemia were screened for mutations in exon 9 of the LDL receptor gene by polymerase chain reaction-restriction fragment length polymorphism (PCR - RFLP). The analysed fragment was 224 bp in length. According to the published cDNA sequence, exon 9 of the LDL receptor gene contains several hypermutable CpG dinucleotides. Three of these sites are Hpa II recognition sites. PCR product of exon 9 obtained from amplification of wild-type DNA sample would yield four fragments after Hpa II digestion. The expected sizes of these restriction fragments were 15, 30, 40 and 139 bp. All normocholesterolemic subjects (n = 33) showed normal RFLP. However, in one patient (72 year old female), abnormal RFLP from Hpa II digestion of the amplified exon 9 was observed, i.e., a fragment of 70 bp and another one smaller than 139 bp. Such RFLP reflects that exon 9 of both alleles of the LDL receptor gene in this patient lost one and gained one Hpa II site. It is interesting that this patient, eventhough harbouring two mutations on both alleles of the LDL receptor gene (presumably homozygous genotype of FH), apparently revealed lipid levels of heterozygous phenotype of FH without symptoms of coronary artery disease. It has yet to be proved whether these genetic variations are disease-related mutations or presumably common DNA polymorphisms.

**No. 371**

- Authors** : Pongrapeeporn KS, Thepsuriyanon P, Leowattana W, Ong-Ajyooth S, Kiartivich S, Yamwong P, Kasemsuk L, Kerdsang K, Nuchpramool W, Laungsuwan S, Amornrattana A.
- Title** : Inexpensive, rapid and convenient PCR-minigel SSCP protocol for polymorphisms and mutations analyses of LDL receptor gene.
- Source** : Journal of the Medical Association of Thailand. 84:S676-83(Suppl.3), 2001(Dec).
- Keywords** : Low density lipoprotein, SSCP, PCR.
- Abstract** : Hypercholesterolemia has been recognized as a major risk factor of atherosclerosis and coronary artery disease. The elevation in plasma low density lipoprotein (LDL) cholesterol is frequently due to genetic alteration at the genetic locus specifying the LDL receptors, leading to defective catabolism of LDL. In order to facilitate the molecular diagnosis of LDL receptor disorder, single strand conformation polymorphism (SSCP) analysis of polymerase chain reaction (PCR) amplified genomic DNA fragments has become a simple and sensitive screening method for identification of DNA polymorphisms and mutations in

LDL receptor gene prior to DNA sequencing. In addition, SSCP patterns can be detected by silver staining to avoid hazardous radioactive material or other costly nonradioactive detection techniques. However, the original SSCP protocol is generally large-formatted, which is both time and reagents consuming as well as cumbersome. Minigel SSCP protocols have thus been devised but they involve, although commercially available, costly precast gels. We describe here a nonradioactive PCR-minigel SSCP protocol which is sensitive, inexpensive, rapid, reproducible and manually convenient. The results in this study demonstrate that minigel-SSCP (gel size: 10 cm x 7.3 cm x 0.075 cm) can detect conformation polymorphisms in PCR-fragments with a comparative sensitivity to large gel SSCP (gel size: 30 cm x 40 cm x 0.04 cm) as exemplified by the SSCP analyses of exon 13 of the LDL receptor gene. For minigel SSCP, the reagents for gel components and silver staining are reduced approximately 9 times and 10 times, respectively. For electrophoresis, electrical power is also reduced 10 times. This improved technique can become routinely used for molecular diagnosis of LDL receptor defect as well as for other genetic disorders.

**No. 372**

- Authors** : Pongraweevan O, Santawat U, Lertakayamanee J, Wongthanapukdee N, Boonkitichaiyaphan S.
- Title** : Cuffed oropharyngeal airway in the patients undergoing short surgical procedures.
- Source** : Journal of the Medical Association of Thailand. 85:S1017-23(Suppl.3), 2002(Sep).
- Keywords** : Cuffed oropharyngeal airway.
- Abstract** : **OBJECTIVE** : This study was designed to study the efficacy of Cuffed oropharyngeal airway (COPA) in the patients undergoing short surgical procedures at Siriraj Hospital. **MATERIALS AND METHOD**: A prospective study of 65 patients, age 15-65 years, scheduled for elective short surgical procedures under general anesthesia were managed with COPA. Lip-mandibular angle distance was used to indicate the appropriate size of COPA. Demographic characteristics, airway assessments, COPA size, insertion time, airway manipulation, complications during COPA insertion, removal and 2 hour postoperative period were recorded. **RESULTS**: Success rate of COPA insertion were 93.8 per cent and 4.6 per cent at 1st attempt and 2nd attempt respectively. Insertion time was 53.27 +/- 20.07 seconds. There were 84.4 per cent of patients who needed airway manipulation during anesthesia. The incidence of complications were 12.3 per cent, 13.8 per cent and 15.4 per cent during insertion, removal and 2 hour postoperatively respectively. **CONCLUSION**: COPA is a new adjunctive airway device designed for direct connection with breathing system with a high success rate of insertion. COPA placement is an easy technique to learn but it usually requires a high incidence of airway manipulations such as head turn, jaw thrust, head tilt, and chin lift, so skill and confidence in its use requires instruction and practice. It would be unwise to use a COPA in an emergency without first having become proficient in its use for routine cases.

**No. 373**

- Authors** : Pradhan SM, Atchaneeyasakul LO, Appukuttan B, Mixon RN, McFarland TJ, Billingslea AM, Wilson DJ, Stout JT, Weleber RG.
- Title** : Electronegative electroretinogram in mucopolipidosis IV.
- Source** : Archives of Ophthalmology. 120(1):45-50, 2002.
- Keywords** : Abnormal Transport, Gene, Mutations, Variant, Disease.
- Abstract** : Objective: To demonstrate the progression of electroretinographic (ERG) findings in mucopolipidosis IV. Methods: Two patients with mucopolipidosis IV were examined clinically and their condition was followed up for ophthalmic manifestations of the disease. Electro-retinograms were performed on both patients, and conjunctival biopsy specimens were analyzed for characteristic ultrastructural inclusion bodies using light and electron microscopy. Genomic DNA isolated from peripheral blood was screened for 2 major founder mutations in the ML4 gene using polymerase chain reaction and restriction fragment length polymorphism analyses. Haplotypes were confirmed by automated sequencing of polymerase chain reaction products. Results: In patient 1, an ERG obtained at 12 months of age showed mildly subnormal amplitude of rod-mediated and cone-mediated responses and significantly prolonged rod and cone b-wave implicit times. An ERG obtained when the patient was 6.6 years old disclosed marked progression with greater loss of b-wave than a-wave responses to rod-and-cone-mediated activity. Scotopic ERG at the highest intensity was electronegative in configuration. In patient 2, ERG showed minimal rod-mediated responses, severely subnormal cone-mediated responses, and prolonged cone b-wave implicit times. Again, electronegative configuration of the scotopic bright flash response indicated greater disturbance of b-wave generators. Conclusions: Novel ERG findings in 2 cases of mucopolipidosis IV are reported with associated clinical courses, histopathologic abnormality, and genetic studies. In both cases ERGs demonstrate an electronegative configuration, suggesting that the primary retinal disturbance in mucopolipidosis IV may occur at or proximal to the photoreceptor terminals.

**No. 374**

- Authors** : Prakanrattana U, Suksompong S, Sriyoschati S, Pornvilawan S.
- Title** : Anesthesia for arterial switch operation in simple transposition of the great arteries: experience at Siriraj Hospital.
- Source** : Journal of the Medical Association of Thailand. 85:S815-23(Suppl.3), 2002(Sep).
- Keywords** : Anesthesia, Transposition of The Great Arteries, Intact Ventricular Septum.
- Abstract** : Anesthetic management of cardiac patients with complete transposition of the great arteries (TGA) undergoing arterial switch operation (ASO) is challenging. The anesthetic course and perioperative problems were studied. A prospective data collection study of 87 patients was performed between January 1991 and February 2002. The patients were divided into 3 groups: Group 1; 27 neonates with TGA with an intact ventricular septum (IVS), Group 2; 21 with TGA, with IVS who underwent two-stage ASO, and Group 3; 39 with TGA, with a large VSD. The anesthesia consisted of low-dose fentanyl, thiopental, atracurium and isoflurane. Monitoring included ECG, radial or femoral arterial pressure, CVP, LAP, core temperature, SpO<sub>2</sub>, P(E)CO<sub>2</sub>, urine output, ABG's, Hct, ACT, serum glucose and potassium. Fortunately the courses of anesthesia were uneventful. Usual vasoactive medication administered following CPB included nitroglycerin, dobutamine and dopamine. Groups 1, 2 and 3 contained 18.5 per cent, 14.3 per cent and 33.3 per cent of patients who required adrenaline respectively. And only 7.7 per cent of patients in Group 3 had milrinone as an inotrope. Early

tracheal extubation, 2 hours after admission to ICU was performed in 3 patients. Perioperative complications included bleeding, low cardiac output, diaphragmatic paresis, digitalis intoxication, metabolic alkalosis, convulsion, pulmonary hypertensive crisis and death. Two patients who developed a pulmonary hypertensive crisis were successfully managed with inhaled nitric oxide. The overall hospital mortality rate was 19.54 per cent. In conclusion, the anesthetic management for ASO in 87 simple dTGA patients was uneventful at Siriraj Hospital. The major perioperative morbidity and hospital mortality were not directly anesthetic contribution.

**No. 375**

**Authors** : Prakanrattana U, Suksompong S.

**Title** : Comparison of sufentanil and fentanyl for surgical repair of congenital cardiac defects.

**Source** : Journal of the Medical Association of Thailand.  
85:S807-14(Suppl.3), 2002(Sep).

**Keywords** : Sufentanil, Fentanyl, Congenital Cardiac.

**Abstract** : In the present study, the authors compared sufentanil to fentanyl in pediatric patients undergoing congenital cardiac repair. The purpose of the study was to evaluate the hemodynamic variables, time of awakening and successful extubation of the two groups. A prospective, randomized study of 60 children scheduled for elective surgery of congenital cardiac defects was made. Patients were randomly divided into two groups: Group I; sufentanil and Group II; fentanyl (mean body weight, 16.02 +/- 6.67 kg; range 4 to 35 kg; mean age, 5.22 +/- 3.55 years; range 4 months to 1 year). All were premedicated with oral chloralhydrate 50 mg/kg, one hour preoperatively. Anesthesia was induced with sufentanil 1 microg/kg (Group I) or fentanyl 2 microg/kg (Group II) and thiopental 2 mg/kg, followed by atracurium 0.6 mg/kg. All patients were intubated with atracurium 0.6 mg/kg. Anesthesia was maintained using isoflurane in oxygen, nitrous oxide (in non-cyanotic patients). In Group I, sufentanil 0.5 microg/kg was administered intravenously prior to skin incision, median sternotomy, cardiopulmonary bypass (CPB) and after coming off CPB. In Group II, fentanyl 1 mg/kg was administered at the same time periods. Hemodynamic parameters, heart rate (HR), systolic (SBP), diastolic (DBP) and mean arterial blood pressure (MAP), central venous pressure (CVP) were recorded. The administration of pain therapy was determined postoperatively. There was no statistical difference in the demographic data between the patients in the two groups. Following induction of anesthesia, the systolic, diastolic and mean arterial pressures and heartrate decreased. Following tracheal intubation, all hemodynamic parameters in the sufentanil group remained below the baseline values, while the fentanyl group showed an increase above baseline values. An increase above control values of all hemodynamic variables was detected in both groups following skin incision and sternotomy, except that the mean systolic blood pressure and heart rate in the sufentanil group was less than the baseline values. No differences in hemodynamic variables were detected between the two groups following median sternotomy and skin closure. There were significant differences in mean arterial pressure at the time of intubation and skin incision between the two groups. No significant changes in CVP occurred. There were no significant differences in the average time of awakening from anesthesia. The average time before postoperative tracheal extubation was 171.38 +/- 112.74 and 113.72 +/- 67.83 minutes in the sufentanil group and fentanyl group respectively, which was statistically significant. There was no difference in the requirements for morphine (pain relief) and sedation with chlolorahydrate between the groups. Bradycardia was found in 7 and 3 patients receiving sufentanil and fentanyl respectively which was not statistically

significantly different. The bradycardia recovered in a few minutes, following intravenous injection of atropine. Slow injection of the anesthetic drugs can protect patients against serious bradycardia. In conclusion, the safety and efficacy of sufentanil in patients undergoing repair of complex congenital heart defects was the same as fentanyl. There were no significant differences in times of awakening in the two groups. The patients in sufentanil group had a longer time to extubate than the fentanyl group. The need of postoperative sedation and analgesia was the same in both groups.

**No. 376**

- Authors** : Pravatmuang P, Sae-Ngow B, Whanpuch T, Leowattana W.  
**Title** : Effect of HbE and HbH on HbA1C level by ionic exchange HPLC comparing to immunoturbidimetry.  
**Source** : Clinica Chimica Acta. 313(1-2):171-178, 2001(Nov).  
**Keywords** : Hba1c, Hemoglobinopathies, An Ionic Exchange HPLC, Immunoturbidimetry.  
**Abstract** : Background: The hemoglobin (Hb)A1C level is widely used to monitor diabetes mellitus patients. The N-terminal amino acid valine of its beta chain is glycosylated. The assay of HbA1C is based on differences in the charge, chemical and structural properties of the protein. Methods: There are fully automated instruments available in clinical chemistry laboratory to assay HbA1C level. The effect of hemoglobinopathies was studied between an ionic exchange high-pressure liquid chromatography (HPLC) (Bio-Rad Laboratories, USA) and immunoturbidimetry (BM/Hitachi 912 with Roche HBA1CII, Germany-Japan) assay. The influence of high level HbF relative to the HbA1C level by ionic exchange HPLC is known. The effect of HbE and HbH to the HbA1C level by ionic exchange HPLC comparing to immunoturbidimetry was examined. The evaluation was performed on 34 normal controls (A2A), 17 beta thalassemia traits (A2 up arrow A), 36 HbE heterozygotes (EA), 37 HbE homozygotes (EE), 36 beta thalassemia/HbE (EF/EFA), 11 EABart's diseases (EABart's), 34 Hb H diseases (A2/CSAH) and 13 cord blood samples (FA). Conclusions: Hemoglobinopathies can impact on the assay of HbA1C level such as HbE and HbH to ionic exchange HPLC. Although not studied as yet, this effect may influence the other methods such as affinity chromatography.

**No. 377**

- Authors** : Punthuprapasa P, Thammapalard N, Chularerk U, Charoenlarp K, Bhaibulaya M.  
**Title** : Diagnosis of intestinal amebiasis using salivary IgA antibody detection.  
**Source** : Southeast Asian Journal of Tropical Medicine and Public Health. 32:159-64(Suppl.2), 2001.  
**Keywords** : Intestinal amebiasis, Salivary IgA antibody.  
**Abstract** : Attempts were made to use soluble antigen extract of strain HK-9 of *Entamoeba histolytica* to detect salivary IgA antibodies in intestinal amebiasis patients by using ELISA. Total salivary samples of 109 individuals were divided into four groups. Group I comprised 32 patients whose stools were positive only for *E. histolytica* cysts and/or trophozoites. Group II comprised 12 individuals whose stools were positive for *E. histolytica* and other intestinal parasites. Group III comprised 36 individuals whose stools were negative for *E. histolytica* but contained other intestinal parasites such as *E. coli*, *E. nana*, *Blastocystis hominis*, *Trichomonas hominis*, *Giardia lamblia*, *Opisthorchis viverrini*, and hookworm. Group IV comprised 29 healthy individuals whose stools were free from any intestinal parasitic infections. Based on the mean optical density,

OD + 2SD of the results from 29 parasitologically negative healthy individuals, the cut-off OD value for salivary IgA antibodies was 1.265. Therefore, the assays were positive in 14 out of 32 (43.75%) of group I and 2 out of 12 (16.6%) of group II. The assays were positive in 16 out of 36 (44.44%) for group III whereas 2 out of 29 (6.90%) for group IV were positive. The overall sensitivity and specificity of the assays were 36% and 72%, respectively. The false positive rate was 28% and the false negative rate was 64%. The predictive values of positive and negative results were 47% and 63%, respectively. The diagnostic accuracy of ELISA for the presence of salivary IgA antibodies was 58%.

**No. 378**

- Authors** : Puttikhunt C, Kasinrerak W, Srisa-ad S, Duangchinda T, Silakate W, Moonsom S, Sittisombut N, Malasit P.
- Title** : Production of anti-dengue NS1 monoclonal antibodies by DNA immunization.
- Source** : Journal of Virological Methods. 109(1):55-61, 2003.
- Keywords** : Ns1 Protein, Dna Immunization, Monoclonal Antibody, Dengue Virus.
- Abstract** : Monoclonal antibodies against dengue NS1 protein were generated following immunization of mice with plasmid DNA encoding the transmembrane form of NS1 from dengue serotype 2 virus. A mammalian expression vector, pDisplay, was engineered to direct cell surface expression of dengue NS1 and tested for transient expression in COS cells. Two mice were immunized intramuscularly with six doses of 100 mug of plasmid at 2-week intervals; one mouse received a booster of live virus prior to the last plasmid injection. Both mice showed antibody responses against dengue antigens in dot enzyme immunoassay. Following fusion, hybridomas were screened with dot enzyme immunoassay against all four dengue serotypes. Specificity to the NS1 protein was confirmed by western blot analysis. Among five anti-dengue NS1 monoclonal antibodies generated, two clones were serotype 2 specific, two clones reacted with all four serotypes and the last also reacted with Japanese encephalitis virus. Reactivity against native or denatured forms of NS1 revealed three clones with reactivity to linear epitopes and two clones recognizing conformational epitopes. Such diverse specificity of anti-dengue NS1 monoclonal antibodies indicates that DNA immunization, especially with the combination of virus boosting, is an efficient way of producing monoclonal antibodies against viral protein. This has opened up a possibility of producing monoclonal antibodies to rare viral proteins that are difficult to isolate or purify.

**No. 379**

- Authors** : Raengsakulrach B, Nisalak A, Maneekarn N, Yenchitsomanus P, Limsomwong C, Jairungsri A, Thirawuth V, Green S, Kalayanaroj S, Suntayakorn S, Sittisombut N, Malasit P, Vaughn DW.
- Title** : Comparison of four reverse transcription-polymerase chain reaction procedures for the detection of dengue virus in clinical specimens.
- Source** : Journal of Virological Methods. 105(2):219-232, 2002.
- Keywords** : Dengue Virus, Diagnosis, Rt-Pcr.
- Abstract** : The sensitivity of dengue virus identification by mosquito inoculation and four reverse transcription-polymerase chain reaction (RT-PCR) procedures (Am. J. Trop. Med. Hyg. 45 (1991) 418 (H); J. Clin. Microbiol. 29 (1991) 2107 (M); J. Clin. Microbiol. 30 (1992) 545 (L); and Southeast Asian J. Trop. Med. Public Health 27 (1996) 228 (Y)) were compared using coded clinical specimens derived from areas in Thailand where all four dengue serotypes circulate. The sensitivity of virus detection in serologically confirmed dengue cases was 54, 52, 60, 79, and 80% for mosquito inoculation, procedures H, M, L and Y,

respectively. In comparison to clinical specimens which yielded virus isolates by mosquito inoculation, there was relatively low sensitivity in detecting each of the four dengue serotypes by PCR: procedure H-dengue 4 (25%), procedure M-dengue 3 (73%), procedure L-dengue 1 (70%), and procedure Y-dengue 1 (79%). Dengue virus was detectable by RT-PCR for more days of illness and in the presence of dengue-specific antibody when compared to virus isolated in mosquitoes. Procedures L and Y were more sensitive than mosquito inoculation or procedures H and M in detecting all four dengue serotypes in clinical specimens and may be the RT-PCR methods of choice for virus surveillance or research use.

**No. 380**

**Authors** : Raksadawan N, Kankirawatana P, Balankura K, Prateepatana P, Sangruchi T, Atchaneeyasakul LO.

**Title** : Childhood onset myasthenia gravis.

**Source** : Journal of the Medical Association of Thailand. 85:S769-77(Suppl 2), 2002(Aug).

**Keywords** : Myasthenia Gravis.

**Abstract** : The authors share experiences in taking care of 27 cases of childhood onset myasthenia gravis (MGS). In all cases, the diagnosis was confirmed by a combination of clinical examination and Neostigmine test. The majority (92%) had localized ocular myasthenia with median onset of symptoms at 33 months of age. About 24 per cent of them progressed to generalized MGS. A few (8%) presented with respiratory failure that required ventilatory support with onset of symptoms at about 22 months. Thymectomy was performed in 10 cases. Complete and partial remissions were achieved in about 70 per cent and 26 per cent of cases respectively with the combination of an immunosuppressant (azathioprine) and a Cholinesterase inhibitor (pyridostigmine). None experienced a myasthenic crisis with proper management and good follow-up using the above combinations.

**No. 381**

**Authors** : Raksakietisak M, Chinachoti T, Vudhikamraksa S, Svastdi-Xuto O, Surachetpong S.

**Title** : Perioperative desaturation: incidence, causes, management and outcome.

**Source** : Journal of the Medical Association of Thailand. 85:S980-6(Suppl.3), 2002(Sep).

**Keywords** : Perioperative desaturation.

**Abstract** : **OBJECTIVE:** To determine the incidence, causes, management and outcome of desaturation occurring in the perioperative periods (induction, maintenance, emergence and recovery room) at Siriraj Hospital from June 2001-December 2001. **METHOD:** Perioperative incident reports were collected and analyzed. Patients were categorized as having desaturation if the SPO<sub>2</sub> was below 90 per cent for more than 3 minutes. The incidence, causes, management, and outcomes of these patients were examined in detail. **RESULTS:** 62 out of 16,716 cases (0.37%) experienced desaturation. Elective patients (0.41%) experienced desaturation more frequently than emergency patients (0.14%). The causes were airway obstruction, hypoventilation, endotracheal tube problems, aspiration, atelectasis, and pulmonary edema. These patients were treated with higher FiO<sub>2</sub>, airway management, and ventilatory support which led to unplanned ICU admission. 4 patients developed cardiac arrest with successful resuscitation although 2 patients had cerebral infarction. **CONCLUSION:** Perioperative desaturation is an important sign of respiratory complications that should be recognized and treated immediately to prevent mortality and serious morbidity.

**No. 382**

- Authors** : Ratanasuwan W, Techasathit W, Chuenarom V, Suwanagool S, Anekthanont T, Jearanaisilavong J, Chaiprasert A.
- Title** : Infection due to nontuberculous Mycobacterium other than MAC in AIDS patients at Siriraj hospital during 1998-2000: saprophyte vs pathogen.
- Source** : Journal of the Medical Association of Thailand. 85(8):886-93, 2002(Aug).
- Keyword** : Nontuberculous Mycobacterium, AIDS, Saprophyte, Pathogen.
- Abstract** : HIV is a major health problem in Thailand. These patients are vulnerable to opportunistic infections, especially Mycobacterium tuberculosis and MAC infection. However, NTM was considered a rare disease in Thailand before the AIDS era. In this study, there were 38 HIV seropositive patients with NTM (other than MAC) identified from clinical specimens during the 3 year period 1998-2000 at Siriraj Hospital, which has a higher prevalence than the previous report. Among these patients, 29 cases were likely to have had definite infection from NTM, 5 cases possibly had NTM as a pathogen, and 4 cases had NTM as colonization. The most common site of infection was the lung (87%) and most common symptoms were cough (62.2%), fever (34.2%), weight loss (42.1%), and lymphadenopathy (5.3%). The outcome was poor because many NTM are not susceptible to standard medication for tuberculosis which is the empirical treatment for the majority of HIV seropositive patients with a clinical finding suspected of mycobacterial infection. The fatality rate was as high as 58.6 per cent. Awareness of NTM as a potential pathogen in HIV seropositive patients and adjustment of medications even before the availability of culture results may improve the outcome of treatment of NTM infection in HIV seropositive patients.

**No. 383**

- Authors** : Ratanawichitrasin A, Reansuwan W, Ratanawichitrasin S, Bhodhisuwan K, Kongpatanakul S.
- Title** : Risk of breast cancer in post-menopausal women using hormone replacement therapy.
- Source** : Journal of the Medical Association of Thailand. 85(5):583-9, 2002.
- Keywords** : Breast Cancer, Post-Menopausal Women, Hormone Replacement Therapy.
- Abstract** : **OBJECTIVE** : To study the relationship of hormone replacement therapy (HRT) in post-menopausal women and risk of breast cancer. **PATIENTS AND METHOD**: The authors conducted a case-control study comparing the proportion of HRT used between breast cancer and non-breast-cancer women. Cases were breast cancer patients who had natural menopause (excluded hysterectomy) and aged > or = 50-years-old from the Siriraj Breast Cancer database (1983-1996). Controls were post-menopausal volunteers aged 50 year or older who visited Siriraj Hospital for other purposes such as elderly clinics, health check, etc. After informed consent, well-trained surgeons examined the women in the control group to exclude any potential breast cancer. Patient characteristics and risk factors were collected. **RESULTS**: Of 1,913 patients in the database, 623 were included as the cases. Data from 679 volunteers were collected for controls from May to December 1999. Among 1,302 of the study population 58 women had ever used HRT (4.5%), which distributed to 3.2 per cent (20/623) in cases and 5.6 per cent (38/679) in controls. From univariate analysis, age, age at menopause, number of children, habitat, education, contraceptive pills, familial history of breast cancer and HRT usage were associated with breast cancer (p-value<0.05). After multivariate forward stepwise logistic regression analysis, there was no association between HRT use and breast cancer (adjusted odds ratio (OR) = 0.61, 95% CI = 0.31-1.20). In subgroups analysis, women who had older age,

higher education level, history of taking contraceptive pills, or positive familial history of breast cancer in second degree relatives had a decreased risk of breast cancer, while those living outside Bangkok had an increased risk. CONCLUSION: Hormonal replacement therapy in post-menopausal women was not associated with increased risk of breast cancer.

**No. 384**

- Authors** : Rattanachaiyanont M, Kuptniratsaikul V, Dangrat C.  
**Title** : Distal radius bone mineral density and grip strength in peri/postmenopausal Thai women.  
**Source** : Journal of the Medical Association of Thailand. 85(9):1008-13, 2002(Sep).  
**Keywords** : Perimenopausal, Grip Strength, Postmenopausal, Bone Mineral Density.  
**Abstract** : To determine the relationship between distal radius bone mineral density (BMD) and grip strength (GS) in peri/post menopausal Thai women. 177 healthy volunteers, > or = 40 years old, were included. Distal radius BMD of the non-dominant side was measured using dual energy X-ray absorptiometry. GS of both dominant and non-dominant sides was measured using a Jamar dynamometer. The association between BMD and GS was determined by correlation analysis. Other factors possibly affecting the BMD or GS including age, years since menopause (YSM), body weight (BW), height (Ht) and body mass index (BMI) were analyzed by the multiple regression method. It was found that BMD had statistically significant but weak, positive correlation to GS ( $r = 0.262$ ,  $p < 0.001$  for the dominant side,  $r = 0.193$ ,  $p < 0.001$  for non-dominant side). Age and YSM had a negative correlation, whereas, BW and Ht had a positive correlation to either BMD or GS. After multiple regression analysis, the significant predictors of BMD were age and BW, of dominant GS were age and Ht, and of non-dominant GS was YSM. In conclusion, decrements in distal radius BMD and in GS were found in peri/postmenopausal women. Aging seems to be the most important factor for these features. Although the GS has statistically significant correlation to the corresponding BMD, the clinical significance might not be obvious. Furthermore, the stronger correlation of BMD to the contralateral dominant GS than to the ipsilateral non-dominant GS implies that the influence of muscular strength on BMD, if present, is not due to a direct effect in this age group.

**No. 385**

- Authors** : Reinstein DZ, Srivannaboon S, Silverman RH, Sutton HFS, Coleman DJ.  
**Title** : Limits of wavefront guided customized ablation: Biomechanical and epithelial factors.  
**Source** : Investigative Ophthalmology and Visual Science. 43 : 3942 (Suppl. 2), 2002.  
**Keywords** : Biomechanical, Epithelial factors, Wavefront

**No. 386**

- Authors** : Rochanawutanon S, Suddhasthira T, Pairuchvej V, Vajaradul Y.  
**Title** : Long term follow-up of reconstruction with allogeneic mandibular bone crib packed with autogenous particulate cancellous bone marrow.  
**Source** : Cell and Tissue Banking. 3(3):183-197, 2002.  
**Keywords** : Bone marrow.

**No. 387 (712)**

- Authors** : Roekring S, Nielsen L, Owens L, Pattanakitsakul S, Malasit P, Flegel T.W,  
**Title** : Comparison of penaeid shrimp and insect parvoviruses suggests that viral transfers may occur between two distantly related arthropod groups.  
**Source** : Virus Research. 87:79-88 (Issue 1), 2002.  
**Keywords** : Insect,Crustacean,Shrimp,Parvovirus,Densoviriinae,Phylogeny  
**Abstract** : The DNA and putative amino acid sequences of representative insect and shrimp parvoviruses (subfamily Densoviriinae) were analyzed using computer programs. Shrimp viruses included hepatopancreatic parvovirus (HPV) of *Penaeus monodon* (HPVmon) and *P. chinensis* (HPVchin), spawner-isolated mortality virus from *P. monodon* (SMVmon) and infectious hypodermal and hematopoietic necrosis virus (IHHNV) from *P. vannamei*. Insect viruses included *Aedes aegypti* densovirus (AaeDNV), *Aedes albopictus* densovirus (AalDNV), *Junonia coenia* densovirus (JcDNV), *Galleria mellonella* densovirus (GmDNV), *Bombyx mori* densovirus 5 (BmDNV), *Diatraea saccharalis* densovirus (DsDNV) and *Periplaneta fuliginosa* densovirus (PfDNV). Virion size for all these viruses ranged between 18 and 30 nm diameter and ssDNA genome length was between 4 and 6 kb. Using blast or Clustal W with the sequence fragments available, no significant DNA homology was found except for 77% DNA identity between HPVmon and HPVchin. However, phylogenetic trees constructed by comparing DNA genome sequences for putative viral polypeptides, capsid proteins and nonstructural proteins placed the parvoviruses into two Clades: Clade 1 with SMVmon, PfDNV, DsDNV, GmDNV, JcDNV, and BmDNV; and Clade 2 with HPVmon, HPVchin, IHHNV, AalDNV and AaeDNV. The four shrimp parvoviruses fell into two different clades that grouped with different insect parvoviruses.

**No. 388**

- Authors** : Rojananin S, Ratanawichitrasin A.  
**Title** : Limited incision with plastic bag removal for a large fibroadenoma.  
**Source** : British Journal of Surgery. 89(6):787-788, 2002.  
**Keywords** : Breast-Tumors.

**No. 389**

- Authors** : Roubsanthisuk W, Sriussadaporn S, Vawesorn N, Parichatikanond P, Phoojaroenchanachai M, Homsanit M, Peerapatdit T, Nitiyanant W, Vannasaeng S, Vichayanrat A.  
**Title** : Primary adrenal insufficiency caused by disseminated histoplasmosis: report of two cases.  
**Source** : Endocr Pract. 8(3):237-41, 2002.  
**Keywords** : Disseminated Histoplasmosis.

**No. 390**

- Authors** : Ruangtrakool R, Mungnirandr A, Laohapensang M, Sathornkich C.  
**Title** : Laparoscopic cholecystectomy versus open cholecystectomy in children.  
**Source** : Journal of the Medical Association of Thailand. 85(2):172-8, 2002(Feb).  
**Keywords** : Open Cholecystectomy, Children, Laparoscopic Cholecystectomy.  
**Abstract** : INTRODUCTION: Laparoscopic cholecystectomy (LC) is well accepted as the standard cholecystectomy only in adult patients. However, the advantages of LC over open cholecystectomy have never been proved in pediatric patients because the number of pediatric cholecystectomies is limited as well as the faster

ability of pediatric patients to resume their normal activity. MATERIAL AND METHOD: Retrospective study of 42 pediatric cholecystectomies (laparoscopic cholecystectomy (n = 8) (LCs), open cholecystectomy alone (n = 8) (OCs) and open cholecystectomy concomitant with splenectomy (n = 26)(OCs + S)) done in Siriraj University Hospital, Bangkok, Thailand between 1992 and 2000 was conducted. RESULTS: Statistical comparison revealed that LC was superior to OC in regard to diet resumption. LCs resumed soft diet on 1.38 days, whereas OCs and OCs + S could resume soft diet on 3.38 and 3.35 days respectively. The average length of hospitalization following LCs was significantly shorter than OCs' and OCs + S' ones (3.00 vs 8.38 and 4.85 days respectively). There was no morbidity and mortality in LCs, whereas two OCs and three OCs + S had complications. CONCLUSION: In this preliminary study, laparoscopic cholecystectomy is a preferred method of cholecystectomy in children because it has a shorter post-operative interval of diet resumption and shortens hospitalization with minimal morbidity. However, this study has a limited number of patients and further study is still required to conclude the benefits of LC.

**No. 391**

- Authors** : Ruangvaravate N, Kitnarong N, Metheetrairut A, Danwiriyakul W.  
**Title** : Efficacy of brimonidine 0.2 per cent as adjunctive therapy to beta-blockers: a comparative study between POAG and CACG in Asian eyes.  
**Source** : Journal of the Medical Association of Thailand. 85(8):894-900, 2002(Aug).  
**Keywords** : Brimonidine, Beta-Blockers, POAG, CACG.  
**Abstract** : OBJECTIVE: To compare the efficacy and safety profile of brimonidine as adjunctive therapy to beta-blockers between primary open angle glaucoma (POAG) and chronic angle closure glaucoma (CACG) in Asian eyes. DESIGN: Three-months, open-label, prospective study. PARTICIPANTS: Twenty-three patients (35 eyes) with POAG and 25 patients (39 eyes) with CACG were enrolled in the study. INTERVENTION: Patients with POAG or CACG post iridectomy whose IOP was inadequately controlled with topical beta-blocker monotherapy were included. Then, brimonidine 0.2 per cent was added twice daily in both groups. Study visit occurred at weeks 2, 4, 8, and 12. Complete ophthalmic examinations were performed in all visits. MAIN OUTCOME MEASURES: Efficacy was determined by reduction in IOP from baseline and tolerability was assessed by reports of adverse events. RESULTS: After 3 months of brimonidine adjunctive treatment, the mean (+/- SEM) IOP reduction were 4.37+/-0.34 mmHg (19.4%) in POAG and 4.54+/-0.37 mmHg (20.1%) in CACG (p= 0.741). No serious ocular or systemic adverse event was reported. CONCLUSION: Brimonidine was well tolerated, efficacious and provided additive IOP reduction in POAG and CACG.

**No. 392**

- Authors** : Ruangvutilert P, Techatraisak K, Kanokpongsakdi S.  
**Title** : A family at risk of c: a molecular approach for prenatal diagnosis.  
**Source** : Journal of the Medical Association of Thailand. 84(12):1766-71, 2001(Dec).  
**Keywords** : Congenital adrenal hyperplasia, Prenatal diagnosis.  
**Abstract** : The molecular method for prenatal diagnosis in the first trimester was carried out on the second and third pregnancies of a family at risk of congenital adrenal hyperplasia (CAH). The first child, an 8-year-old daughter, was affected. The molecular and cytogenetic prenatal diagnosis on the second pregnancy revealed that the fetus which was a female had been affected. The pregnancy was then terminated. The couple presented with the third pregnancy at 8 weeks' gestation.

The same approach revealed that the fetus, a male, was affected. The couple opted for continuation of pregnancy which was on-going at the time of the manuscript preparation. To our knowledge, this is the first family in Thailand who had molecular approach for prenatal diagnosis of CAH. This approach allows early information about the fetal status of the disease and, together with the result of fetal gender, will help early decision making in pregnancy management.

**No. 393**

- Authors** : Ruangvutilert P, Titapant V, Kerdphoo V.  
**Title** : Placental ratio and fetal growth pattern.  
**Source** : Journal of the Medical Association of Thailand. 85(4):488-95, 2002(Apr).  
**Keywords** : Fetal Growth Pattern, SGA, AGA, LGA.  
**Abstract** : INTRODUCTION: Placental hypertrophy and reduced fetal growth have been postulated to be an adaptation to maintain placental function in pregnant women with complications such as malnutrition. If this is true, a pregnancy with impaired fetal growth, resulting in a small for gestational age (SGA) infant, should have an increased placental weight to birthweight ratio (placental ratio) compared to those with appropriate for gestational age (AGA) or large for gestational age (LGA) infants. OBJECTIVES: To determine the relationship between placental ratio and fetal growth pattern. MATERIAL AND METHOD: Labour and delivery data of 1000 deliveries in the Department of Obstetrics & Gynecology, Siriraj Hospital from January 2001 to June 2001 were retrospectively studied to compare the placental ratios among pregnancies with SGA, appropriate for gestational age (AGA) and large for gestational age (LGA) infants. RESULTS: From 96 SGA, 804 AGA and 100 LGA cases, a higher placental ratio was found in the SGA group compared to AGA (0.2074 and 0.1985 respectively,  $p = 0.013$ ). However, actual placental hypertrophy was not found as demonstrated by a lower placental weight in SGA compared with AGA pregnancies of the same birthweight range. There was no significant difference in placental ratio between the LGA and AGA group, the ratios being 0.2020 and 0.1985 respectively ( $p = 0.260$ ). Although a positive correlation between placental weight and birthweight was observed in the AGA and LGA groups, it was not demonstrated in the SGA infants. This might influence the placental ratio in the SGA group. CONCLUSION: SGA pregnancies are associated with an increased placental ratio which appears not to be due to placental hypertrophy. As reduced birthweight has been shown to be correlated to diseases in adult life, whether this association between SGA and an increased placental ratio will have an implication in future obstetric care and prediction of diseases in adult life remains to be elucidated.

**No. 394**

- Authors** : Sanansilp V, Mahuntasapong W, Phoncharoensomboon P.  
**Title** : Starting intravenous morphine in the postanesthesia care unit yielded better postoperative analgesia.  
**Source** : Journal of the Medical Association of Thailand. 85:S934-41(Suppl.3), 2002(Sep).  
**Keywords** : Postanesthesia Care Unit, Postoperative Analgesia.  
**Abstract** : The administration of morphine intravenously in the Postanesthesia Care Unit (PACU) was practiced in many parts of the world, but not routinely done in Thailand. This prospective randomized controlled trial was performed to reassure Thai personnel that this practice was safe, to find the optimum dose of morphine for administration in the PACU, and to find the pain level at which patients

needed no more analgesics. Eighty gynecological patients, ASA class I or II, were randomly allocated into two groups. Group A received morphine intramuscularly on demand for pain every 6 hours as is conventional. Group B received morphine intravenously by titration (with pain) in the PACU. On the ward, they received intramuscular morphine for pain as required. No patients had respiratory depression or oversedation. The amount of morphine needed in the PACU was related to and could be calculated from the pain score at which they first needed analgesics. Time to the first requirement of intramuscular morphine on the ward in group B was significantly longer than in group A. The amount of morphine and the number of analgesic requests on the ward in group B were significantly less than in group A. We concluded that giving morphine intravenously in the PACU was safe, effective and reduced postoperative analgesic requirement. The dose of morphine in the PACU could be calculated from the pain score at patients' first request for analgesics. Most patients declined additional analgesics when their pain was acceptable and tolerable.

**No. 395**

- Authors** : Sanansilp V, Soontarinka S, Kantigal P, Visalyaputra S, Deesawat J, Phadermwongsa P, Parakkamodom S, Vudhikamraksa S.
- Title** : Adding droperidol to morphine patient-controlled analgesia: effect on nausea and vomiting.
- Source** : Journal of the Medical Association of Thailand. 85:S923-33(Suppl.3), 2002(Sep).
- Keywords** : Nausea, Vomiting, Patient-Controlled Analgesia.
- Abstract** : This prospective, double-blind, randomized, controlled trial was performed to evaluate the antiemetic effectiveness and side effects of adding droperidol to morphine delivered via a patient-controlled analgesia (PCA) device in 94 women undergoing transabdominal hysterectomy with a standardized anesthetic regimen. They were randomly allocated to receive postoperative PCA as either bolus doses of morphine 1 mg or a combination of morphine 1 mg and 0.0625 mg droperidol with a lockout interval of 5 minutes and no continuous infusion. The incidence of nausea 6-18 hours postoperatively and 18-24 hours postoperatively was significantly lower in the morphine and droperidol group than in the morphine only group and its severity 2-6 hours, 6-18 hours, and 18-24 hours postoperatively was significantly lower. The number needed to treat to prevent nausea comparing the morphine only group at 6-18 and at 18-24 hours postoperatively were 4 and 4 (95% CI 2-27 and 2-11, respectively). The amount of morphine used 6-18 hours postoperatively in the droperidol group was lower than in the morphine only group. Although the incidence of vomiting and the amount of rescue antiemetics were lower in the morphine and droperidol group, the difference was not statistically significant. Postoperative pain scores were not different between the groups. No patients were oversedated. A series of extrapyramidal reactions were observed in one patient in the morphine and droperidol group. The drug and consumable item cost was not different between the groups. We conclude that droperidol added to morphine in PCA reduces nausea. The appropriate dose of droperidol should be further investigated to reduce the incidence of vomiting.

**No. 396**

- Authors** : Sanpakit K, Veerakul G, Kriengsuntornkij W, Chokephaibulkit K, Tanphaichitr VS, Mahasandana C.
- Title** : Malignancies in HIV-infected children at Siriraj Hospital.
- Source** : Journal of the Medical Association of Thailand. 85:S542-8(Suppl 2), 2002 (Aug).
- Keywords** : HIV, Children, As Kaposi's Sarcoma, Non-Hodgkin's Lymphoma.
- Abstract** : **BACKGROUND:** Some malignancies such as Kaposi's sarcoma, non-Hodgkin's lymphoma (NHL) are one of the acquired immunodeficiency syndrome (AIDS)-defining illnesses. With the improving survival of patients with AIDS due to better prevention and treatment of infectious complications, there may well be an increase in AIDS-related malignancies. **OBJECTIVE:** To study malignancies in human immunodeficiency virus (HIV)-infected children in view of demographic data, HIV disease status, characters of malignancies, and treatment outcome. **METHOD:** Retrospective study was performed in HIV-infected children with malignancies at Siriraj Hospital from January 1995 to October 2001. **RESULTS:** During the 6 year and 10 month period, there were 7 HIV-infected children (2 boys, 5 girls) with malignancies. Mean age at diagnosis of malignancies was 3 years 7 months (2 years 6 months-5 years). Hepatomegaly and lymphadenopathy were the most common presenting symptoms. All patients had NHL stage III or IV. Burkitt's lymphoma was the predominant type. Six patients were treated with appropriate chemotherapy and one patient also received antiretroviral therapy. Only one patient with large cell lymphoma stage IV who received both antiretroviral and chemotherapy has survived to date. Five patients died during chemotherapy treatment and one patient died before receiving chemotherapy. Causes of death of these patients were infections. One of them with Burkitt's lymphoma stage III also had central nervous system (CNS) relapse at the time of death. Mean survival time after diagnosis with malignancies was 11 months (15 days-3 years 1 month). **CONCLUSION:** NHL is the most common malignancy in HIV-infected children at Siriraj Hospital. Age at presentation of NHL in these children is younger than their non-HIV counterpart. Outcome of treatment is poor. Adjustment protocol for treatment of malignancy in HIV-infected children combined with antiretroviral therapy for controlling HIV infection should be studied further.

**No. 397**

- Authors** : Santawat U, Pongraweewan O, Lertakayamanee J, Rushatamukayanunt P, Phalakornkule N, Svasdi-Xuto O.
- Title** : Can ketamine potentiate the analgesic effect of epidural morphine, preincisional or postincisional administration?
- Source** : Journal of the Medical Association of Thailand. 85:S1024-30(Suppl 2), 2002(Sep).
- Keywords** : Epidural Morphine, Preincisional, Postincisional Administration, A Randomized Controlled Trial.
- Abstract** : A randomized controlled trial was conducted to determine the effect of adding epidural ketamine to epidural morphine comparing between giving ketamine at preincisional time and postincisional time on postoperative analgesia in patients undergoing gynecological operations. Eighty patients scheduled for gynecological operation under combined epidural-general anesthesia were randomly divided into 4 groups. Group 1 received epidural morphine 3 mg before skin incision. Group 2 received epidural morphine 3 mg after skin incision. Group 3 received epidural morphine 3 mg and ketamine 30 mg before skin incision. Group 4 received epidural morphine 3 mg and ketamine 30 mg after skin incision. Lidocaine 2 per cent with epinephrine 1:200,000 was used as the main anesthetic agent during the operation in all groups. Postoperative analgesics were pethidine 1 mg/kg intramuscularly or paracetamol 1,000 mg oral. The time to the first analgesic requirement and pain during 48 h were recorded. The

amount of pethidine and paracetamol required and the time to the first dose of analgesic requirement were not significantly different among the groups. There were no differences in the incidences of pruritus, nausea, vomiting and nightmare. We concluded that adding ketamine to epidural morphine either by preincisional or postincisional administration did not potentiate the analgesic effect of epidural morphine.

**No. 398**

- Authors** : Sawathiparnich P, Likitmaskul S, Angsusingha K, Nimkarn S, Chaichanwatanakul K, Laohapansang M, Tuchinda C.
- Title** : Persistent hyperinsulinemic hypoglycemia of infancy: experience at Siriraj Hospital.
- Source** : Journal of the Medical Association of Thailand. 85:S506-12(Suppl 2), 2002 (Aug).
- Keywords** : Persistent hyperinsulinemic hypoglycemia of infancy.
- Abstract** : BACKGROUND: Persistent hyperinsulinemic hypoglycemia of infancy (PHHI) is the most common cause of recurrent or persistent hypoglycemia in early childhood. Conventionally, pancreatectomy (Px) has often been recommended to control hypoglycemia. However, PHHI can be managed successfully by intensive medical treatment to avoid pancreatectomy. METHOD: Data from 10 infants (8M, 2F) with PHHI were retrospectively analyzed. RESULTS: Eight patients (80%) developed symptoms within 72 hours after birth (early-onset). Six patients (60%) underwent 85 per cent-95 per cent Px due to failure of medical treatment. Two patients who underwent less than 95 per cent Px required second Px (97% and 99%). One patient developed permanent diabetes mellitus and malabsorption. Hypoglycemia could be successfully managed by medication alone in four patients (40%). Of these, three patients had early-onset neonatal hypoglycemia. Medication could be discontinued in three patients (75%). Three of ten patients (30%) had delayed development. Pancreatectomies and/or the diagnosis of PHHI were made late for these patients. One of these three children also developed epilepsy. CONCLUSIONS: Patients with PHHI frequently require pancreatectomy which commonly results in long-term complications especially diabetes mellitus and malabsorption. Our data suggest that PHHI can be managed successfully with an intensive medical regimen even in patients with early-onset hypoglycemia. Although medical management is very laborious for the family and physician, it should be applied until euglycemia is accomplished. Moreover, the early diagnosis of PHHI and the successful hypoglycemic control are very necessary to prevent permanent neurologic sequelae.

**No. 399**

- Authors** : Senanarong V, Pongvarin N, Prayoonwiwat N, Udompuntharak S, Cummings JL
- Title** : Frontal behaviors and executive function in Thai patients with Alzheimer's Disease.
- Source** : Neurobiology of Aging. 23(1):602(Suppl. 1), 2002.
- Keywords** : Alzheimer's Disease.

**No. 400**

- Authors** : Senanarong V, Vannasaeng S, Pongvarin N, Ploybutr S, Udompunthurak S, Jamjumras P, Fairbanks L, Cummings JL.
- Title** : Endogenous estradiol in elderly individuals - Cognitive and noncognitive Associations.
- Source** : Archives of Neurology. 59(3):385-389, 2002.
- Keywords** : Estrogen Replacement Therapy, Surgically Menopausal Women, Alzheimers-Disease, Postmenopausal Women, Controlled Trial, Older Women, Risk, Dementia, Memory, Ovariectomy.
- Abstract** : Objective : To investigate an association between endogenous estradiol (E<sub>2</sub>) levels and cognition and behavior in elderly individuals. Patients: We studied 135 community-based men and women aged 52 to 85 years in urban Bangkok, Thailand; 72 had dementia and 63 did not. Materials and Methods: Dementia was diagnosed using Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, criteria after appropriate investigations. Blood samples for assay were collected in the morning after 6 hours of fasting. Levels of E<sub>2</sub> were measured by radioimmunoassay (double antibody technique). The Thai version of the Mini-Mental State Examination was used to assess cognition; the Neuropsychiatric Inventory was used to assess neuropsychiatric symptoms; and the Functional Assessment Questionnaire was used to assess instrumental activities of daily living. Results: There was no correlation between age and level of E<sub>2</sub> in either men or women. Individuals with lower estrogen levels had more behavioral disturbances (men:  $r = -0.467$ ,  $n = 45$ ;  $P = .001$ ; women:  $r = -0.384$ ,  $n = 90$ ;  $P < .001$ ) and worse cognition (men:  $r = 0.316$ ,  $n = 45$ ;  $P = .03$ ; women:  $r = 0.243$ ,  $n = 90$ ;  $P = .02$ ) and function (men:  $r = -0.417$ ,  $n = 45$ ;  $P = .004$ ; women:  $r = -0.437$ ,  $n = 90$ ;  $P < .001$ ). The threshold level of endogenous E<sub>2</sub> in elderly individuals for the risk of developing dementia was less than 15 pg/mL (<55 pmol/L) in men and less than 1 pg/mL (<4 pmol/L) in women. Conclusion: Lower E<sub>2</sub> levels are correlated with poor cognitive, behavioral, and functional status in older individuals.

**No. 401**

- Authors** : Shannon J, Thomas DB, Ray RM, Kestin M, Koetsawang A, Koetsawang S, Chitnarong K, Kiviat N, Kuypers J.
- Title** : Dietary risk factors for invasive and in-situ cervical carcinomas in Bangkok, Thailand.
- Source** : Cancer Causes and Control. 13(8):691-699, 2002.
- Keywords** : Cancer, Nutrition, Prevention Research.
- Abstract** : Objective : Although human papillomavirus (HPV) may be a necessary cause of cervical cancer, most women with HPV infections do not develop this disease. This study was conducted to evaluate the possible effects of specific dietary factors on cervical carcinogenesis. Methods: Fifty hospitalized in-situ cases and 125 controls were identified from family planning or gynecologic clinics associated with Siriraj hospital in Bangkok, Thailand, and 134 hospitalized invasive cases and 384 hospitalized controls from the public wards of Siriraj Hospital were administered a food-frequency questionnaire and tested for HPV DNA in exfoliated cervical cells. Odds ratios in relation to intake of foods high in vitamin C, folate, vitamin E, vitamin A, beta-carotene, retinol, and cruciferous vegetables were estimated using logistic regression in case-control comparisons and in case-case comparisons adjusted for HPV status. Results: High intake of foods rich in vitamin A, and particularly high-retinol foods, were associated with a reduced risk of in-situ disease and less strongly also with a reduced risk of invasive as compared to in-situ disease. No association was found between intake of cruciferous vegetables, foods

high in vitamin C, folate, vitamin E, and beta-carotene and risk of either in-situ or invasive cervical cancer. Conclusions: Increasing intake of foods rich in total vitamin A, and particularly high-retinol foods, may reduce risk of in-situ cervical cancer, and at the highest level of intake may inhibit progression to invasion. If others confirm these results they suggest means of reducing the risk of cervical cancer that are amenable to public health action.

**No. 402**

**Authors** : Simasathien T, Phankingthongkum S, Visitsunthorn N, Vichyanond P.  
**Title** : IgG subclass deficiencies in Thai children.  
**Source** : Journal Of Allergy And Clinical Immunology. 109(1):567 (Suppl. S), 2002.  
**Keywords** : IgG Subclass, Children.

**No. 403**

**Authors** : Siriboonrit U, Kyogoku C, Sirikong M, Tsuchiya N, Bejrachandra S, Suthipinittharm P, Luangtrakool K, Srinak D, Thongpradit R, Chandanayingyong D, Tokunaga K.  
**Title** : Association of fey receptor IIB, IIIA and IIIB polymorphisms with susceptibility to systemic lupus erythematosus in thais.  
**Source** : Arthritis and Rheumatism. 46(9):S287-S287 (Suppl. S), 2002.  
**Keywords** : Fey receptor IIB, Fey receptor IIIA, Fey receptor IIIB, Systemic lupus erythematosus

**No. 404**

**Authors** : Sirikong M, Tsuchiya N, Chandanayingyong D, Bejrachandra S, Suthipinittharm P, Luangtrakool K, Srinak D, Thongpradit R, Siriboonrit U, Tokunaga K.  
**Title** : Association of HLA-DRB1\*1502-DQB1\*0501 haplotype with susceptibility to systemic lupus erythematosus in Thais.  
**Source** : Tissue Antigens. 59(2):113-7, 2002.  
**Keywords** : HLA-DRB1, Systemic Lupus Erythematosus.  
**Abstract** : In this study, we investigated the association of HLA-DRB1 and DQB1 with Thai patients with SLE. A highly significant increase in the frequency of DRB1\*1502 and DQB1\*0501 was found in SLE patients compared with normal controls. DRB1\*1501 and DRB1\*1602 were also slightly increased. In contrast, DRB1\*1202 and DQB1\*0301 were decreased, and DRB1\*0406 and DRB1\*1401 were not found in the patients' group. The haplotype analysis revealed that DRB1\*1502 - DQB1\*0501 was most strongly associated with SLE, and also suggested a primary role for DRB1 rather than DQB1. Taken together with the previous report which demonstrated the association of the same haplotype in Taiwan, our present observations strongly suggested that DRB1\*1502 - DQB1\*0501 is the major HLA haplotype that confers susceptibility to SLE in the South-east Asian populations.

**No. 405**

**Authors** : Sirimai K, Kiriwat O, Neungton S, Suvanichchati S.  
**Title** : Misoprostal use for therapeutic abortion in Siriraj Hospital: the year 2000.  
**Source** : Journal of the Medical Association of Thailand. 85(4):416-23, 2002(Apr).  
**Keywords** : Misoprostal, Therapeutic Abortion.  
**Abstract** : OBJECTIVE: To evaluate the efficacy and the adverse effects of misoprostal usage for therapeutic abortion in Siriraj Hospital. STUDY DESIGN: Cross-

sectional, descriptive study. MATERIAL AND METHOD: A consecutive series of 101 therapeutic abortions was performed in the Department of Obstetrics & Gynecology, Siriraj Hospital in the year 2000. The patients were interviewed for general information and registered, as well as in-patient data. Any adverse events were recorded and collected from the inpatient record file. All data were analyzed statistically. RESULTS: 42 therapeutic abortions were conducted in association with misoprostal usage. Misoprostal was used for cervical ripening in 8 patients with a good outcome. 31 therapeutic abortions were induced by misoprostal alone regimen. A higher success rate (74.1%) was correlated with higher gestational age. 27 out of 31 cases were second trimester abortion. The induction to abortion interval was 18.0+/-10.5 hours (range 5-48). No factor, including age, weight, total dose of misoprostal use, nulliparity and viability of the fetus, could be demonstrated to affect the misoprostal activity defined by induction to abortion interval. There was no serious adverse event, except for severe abdominal cramping (26.2%) and fever (14.3%). CONCLUSION: Misoprostal alone can be used with caution for abortion induction especially in second trimester abortion.

**No. 406**

- Authors** : Sirimai K, Titapant V, Roongphornchai S.  
**Title** : Morbidity and mortality from birth before arrival at Siriraj Hospital.  
**Source** : Journal of the Medical Association of Thailand. 85(12):1258-63, 2002(Dec).  
**Keywords** : Morbidity, Mortality, Birth.  
**Abstract** : OBJECTIVE: To identify maternal and infant morbidity and mortality from birth before arrival at Siriraj Hospital. STUDY DESIGN: Prospective case-control study. Setting: Department of Obstetrics & Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University. SUBJECTS: Three hundred and twenty patients, who had delivered at Siriraj Hospital, were divided into two groups. The study group consisted of 160 patients, who gave birth before admission to the labour room of Siriraj Hospital. The control group consisted of 160 patients, who had normal deliveries in the labour room of Siriraj Hospital at the same period of time. INTERVENTION: Interviewing the patients and reviewing the medical records of the mothers and infants from both groups. The data were analyzed by using the EpiInfo program. MAIN OUTCOME MEASURE: Maternal and infant characteristics after delivery, maternal and infant outcomes including puerperal morbidity, low birth weight, perinatal death and infant morbidity. RESULTS: The study showed that the mothers in the study group had to stay in the hospital longer than the control group (3.9 +/- 2.5 days and 3.6 +/- 1.3 days respectively,  $p < 0.05$ ). The infants in the study group also had to stay in the hospital longer than the control group (5.1 +/- 6.5 days and 3.3 +/- 1.7 days respectively,  $p < 0.001$ ). The birth weights of infants in the study group were significantly lower than in the control group (2,753.4 +/- 594.1 grams and 3,016.6 +/- 405.0. grams respectively,  $p < 0.001$ ). The body temperature of the newborns in the study group were also lower than in the control group (36.2 +/- 0.6 degree Celsius and 37.0 +/- 0.4 degree Celsius respectively,  $p < 0.05$ ). Concerning maternal and infant outcomes, all variables including low birth weight, perinatal death and infant morbidity were better in the control group significantly ( $p < 0.05$ ) except for puerperal morbidity that had no significant difference ( $p = 0.77$ ). CONCLUSION: From the present study, the authors confirmed the higher mortality and morbidity rate of infants who were born unexpectedly before hospital admission. However, there was no difference in morbidity between the mothers of both groups.

**No. 407**

- Authors** : Siripassorn K, Santiprasitkul S, Udompanthurak S, Thamlikitkul V.  
**Title** : Risk factors for Pseudomonas aeruginosa bacteremia in Thai patients.  
**Source** : Journal of the Medical Association of Thailand. 85(10):1095-9, 2002(Oct).  
**Keywords** : Pseudomonas aeruginosa bacteremia.  
**Abstract** : A case control study to determine the risk factors for P. aeruginosa bacteremia was conducted in patients admitted to Siriraj Hospital in 1998. The case group consisted of 65 patients with P. aeruginosa bacteremia. There were 3 control groups. 65 patients with E. coli bacteremia, 64 patients with S. aureus bacteremia and 65 patients without bacteremia. Demographic information and potential risk factors i.e. type of infection, associated diseases/conditions, procedures/surgery, previous/current use of antibiotics and previous/current use of immunosuppressive/cytotoxic agents were extracted from the patients' medical records and compared. Univariate analysis revealed that the factors associated with P. aeruginosa bacteremia were infections acquired while hospitalized, hematologic malignancy, neutropenia, COPD, antibiotic receivers, cytotoxic agents receivers. However, multivariate analysis revealed that only hematologic malignancy, infections acquired while hospitalized and previous use of parenteral antibiotics were risk factors for P. aeruginosa bacteremia.

**No. 408**

- Authors** : Siritantikorn S, Puthavathana P, Suwanjutha S, Chantarojanasiri T, Sunakorn P, Ratanadilok Na Phuket T, Nawanopparatsakul S, Teeyapaiboonsilpa P, Taveepvoradej S, Pengmesri J, Pongpate S.  
**Title** : Acute viral lower respiratory infections in children in a rural community in Thailand.  
**Source** : Journal of the Medical Association of Thailand. 85:S1167-75(Suppl.4), 2002(Nov).  
**Keywords** : Children, Rural Community, Acute Viral Lower Respiratory Infection.  
**Abstract** : The present study was conducted as a population based cohort in a rural community of Amphoe Takhli, Nakhon Sawan province for the determination of the prevalence of acute viral lower respiratory infection (ALRI) in pediatric cases under 5 years of age from November 1998 to February 2001. There were 472 ALRI episodes during the study period; and there were 5 cases who contracted ALRI twice. The etiologic agents were determined by indirect immunofluorescence (IIF) test using specific monoclonal antibodies for the staining of exfoliated cells in nasopharyngeal aspirate (NPA) samples. The slides of fixed cells were prepared by Takhli Hospital and posted in ambient temperature to the Virology Laboratory, Siriraj Hospital where they were stained and examined. Among 472 episodes of ALRI, 170 (36.0%) viral agents were found. Viral agents were associated with 41.4 per cent of all pneumonic cases. Respiratory syncytial virus (RSV) was the most common virus observed in the present study; and it was also the most common virus associated with pneumonia and bronchitis. RSV subgrouping was performed directly in NPA samples by IIF test using a panel of subgroup specific monoclonal antibodies. RSV subgroup B predominated over subgroup A in the first study year, and it was vice versa in the second year. Overall, more cases of subgroup B were found which was in contrast to what the authors had reported in the previous study. Prevalence of RSV was seasonal dependent, the epidemic was seen during the rainy season with peaks in August or September of each year. As the method of viral identification was limited to IIF only, therefore, fewer viruses were detected. Parainfluenza viruses were detected as the second most common viral agent, the viruses spread during early summer with peaks in February or March of each year. However, its association with croup could not be demonstrated which may be due to the insensitivity of IIF in the diagnosis of non-RSV infection. Nevertheless, in

terms of feasibility to investigate the disease in a rural area, IIF is economic, convenient and rapid; and gives enough information for the nationwide plan of a health care development system.

**No. 409**

**Authors** : Sirivatanauksorn Y, Sirivatanauksorn V, Lemoine NR.  
**Title** : DNA fingerprinting from cells captured by laser microdissection.  
**Source** : Methods Enzymol. 356:289-94, 2002.  
**Keywords** : DNA Fingerprinting, Cells Captured, Laser Microdissection.

**No. 410**

**Authors** : Sitthiseripratip K, Van Oosterwyck H, Vander Sloten J, Mahaisavariya B, Bohez ELJ, Suwanprateeb J, Van Audekercke R, Oris P.  
**Title** : Finite element study of trochanteric gamma nail for trochanteric fracture.  
**Source** : Medical Engineering and Physics. 25(2):99-106, 2003.  
**Keywords** : Trochanteric Fracture, Trochanteric Gamma Nail (TGN), Finite Element Analysis.

**Abstract** : A three-dimensional finite element study of trochanteric fracture fixation by a trochanteric gamma nail (TGN) was investigated in this study. The analyses were performed under one-legged stance load boundary conditions to study the stress distribution and displacements. The influence of material properties (E-modulus) of the implant, the bone and contact condition in the fracture zone was determined. The results show that the stresses in the implant were lower in case of titanium alloy implant material but at the same time higher displacements occurred. The results also indicate that the stresses in the TGN gradually reduced throughout the healing process of the bone in the fracture zone. (C) 2003 IPPEM. Published by Elsevier Science Ltd. All rights reserved.

**No. 411**

**Authors** : Somprakit P, Lertakyamanee J, Satraratanamai C, Wanicksamban S, Silapadech A, Chainchop P, Muangsuay V.  
**Title** : Mental state change after general and regional anesthesia in adults and elderly patients, a randomized clinical trial.  
**Source** : Journal of the Medical Association of Thailand. 85:S875-83(Suppl. 3), 2002(Sep).  
**Keywords** : Regional Anesthesia, Elderly, Randomized Clinical Trial.  
**Abstract** : BACKGROUND: Mental state changes after anesthesia seemed to be more frequent in older patients, but the results were still unclear. OBJECTIVE: To compare the mental scores between adults and elderly patients after general and regional anesthesia. METHODS: This was a stratified randomized trial with factorial design. Sixty patients  $\geq 60$  years old and sixty patients  $< 60$  years old were randomly assigned to receive general or regional anesthesia. Their mental states were assessed blind by investigators, using the Thai Mental State Examination score. RESULTS: The two anesthetic groups showed no difference in the mental scores, but the two age groups showed significantly different scores. The components of mental states that were significantly different were orientation and recall. There were no significant differences in registration, attention, calculation and language. The model for predicting the score included age, education level and narcotics given within six hours before assessment. Sex, weight, intraoperative hypotension, blood loss and duration of anesthesia could not explain the change in the scores. CONCLUSION: Age, but not anesthetic technique, affected the mental scores after anesthesia.

**No. 412**

- Authors** : Somprakit P.  
**Title** : Professor Salard Tupavong, key contributor to the development of anesthesia in Thailand.  
**Source** : Journal of the Medical Association of Thailand. 85:S795-800(Suppl. 3), 2002(Sep).  
**Keywords** : Anesthesia.  
**Abstract** : The practice of Anesthesiology by a qualified Thai national was introduced to the Kingdom of Thailand 50 years ago, when Professor Salard Tupavong graduated from the United States of America and returned to Siriraj Hospital. She made a tremendous contribution to the birth of anesthesia as a specialty, as a pioneer of modern anesthesia and pain therapy in Thailand. She initiated a Residency Training Program and an Inter-hospital Lecture Program in Thai Anesthesiology. She has also helped promote the academic advance of the specialty as well as served as a source of communication and distribution of knowledge for Thai and Asian anesthesiologists. She was regularly invited as an honorary speaker by the committees of both national and international congresses. We are most appreciative of everything that she has done and wish her happy and healthy days ahead.

**No. 413**

- Authors** : Sonoda S, Leng LY, Terashima M, Honda Y, Teguh S, Tresukosol D, Tian LT, Fitzgerald PJ, Honda H.  
**Title** : Long-term angiographic outcome after biosensors S-stent implantation.  
**Source** : American Journal of Cardiology. 90(6a): Tct249 (Suppl. S), 2002.  
**Keywords** : Biosensors S-Stent Implantation.

**No. 414**

- Authors** : Soongswang J, Durongpisitkul K, Ratanarapee S, Leowattana W, Nana A, Laohaprasitiporn D, Akaniroj S, Limpimwong N, Kangkagate C.  
**Title** : Cardiac troponin T: Its role in the diagnosis of clinically suspected acute myocarditis and chronic dilated cardiomyopathy in children.  
**Source** : Pediatric Cardiology. 23(5):531-535, 2002.  
**Keywords** : Myocarditis, Dilated Cardiomyopathy, Cardiac Troponin T.  
**Abstract** : This study was conducted to assess the use of the serum cardiac troponin T (cTnT) level as a noninvasive indicator to differentiate acute myocarditis and chronic dilated cardiomyopathy in pediatric patients. Myocarditis and dilated cardiomyopathy are clinically difficult to differentiate. Endomyocardial biopsy proved to be quite useful. However, the nature of the procedure-invasiveness, time-consuming, and limited sensitivity-caused some concerns, especially in pediatric patients. Hence, we attempted to find an alternative method that could give a prompt diagnosis of acute myocarditis. Twenty cases with clinically suspected myocarditis or dilated cardiomyopathy and a control group of 21 cases with moderate left-to-right shunt and congestive heart failure were recruited. History, physical examination, electrocardiogram, chest roentgenogram, echocardiogram, cTnT, creatine kinase MB isoenzyme (CK-MB mass), and/or endomyocardial biopsy were compared. The gold standard used to diagnose myocarditis is endomyocardial biopsy (Dallas criteria) and/or recovery from cardiovascular problems within 6 months of follow-up. Ten patients were diagnosed as having myocarditis (group 1) and 10 with chronic dilated cardiomyopathy (group 2). The control group of 21 cases was designated as group 3. The median serum cTnT levels were 0.088 (0.04-3.11), 0.010 (0.010-0.990), and 0.010 (0.010-0.550) ng/ml in groups 1, 2, and 3,

respectively. The mean CK-MB mass level for groups, 1, 2, and 3 were 18.35 (7.14-70.00), 4.80 (0.54-108.00), and 2.26 (0.95-7.06) ng/ml. The study showed that both the cTnT and CK-MB mass levels were significantly higher in group I than either group 2 or group 3. Histopathology was studied in 9 cases. In 2 of 5 cases and in all 4 cases in group I and group 2 histopathology was pathologically proved. Levels of cTnT and CK-MB were significantly higher for myocarditis than for dilated cardiomyopathy and left-to-right shunt with CHF. Further study is needed to assess the optimum cTnT level for differentiating both conditions.

**No. 415**

- Authors** : Soongswang J, Sangtawesin C, Sittiwangkul R, Wanitkun S, Muangmingsuk S, Sopontammarak S, Klungratana C, Kangkagate C.
- Title** : Myocardial diseases in Thai children.
- Source** : Journal of the Medical Association of Thailand. 85:S648-57(Suppl 2), 2002(Aug).
- Keywords** : Myocardial Diseases, Children, Dilated Cardiomyopathy, Hypertrophic Cardiomyopathy.
- Abstract** : Myocardial diseases are among the important causes of mortality and morbidity in children. This drew the authors attention to the study of myocardial diseases in children to find out the outcome, factors affecting the outcome, and management strategies. The authors retrospectively studied children who had been diagnosed with primary myocardial diseases at six university hospitals in Thailand from January 1996 to December 2000. The total number of cases was 209 which accounted for 1.2 per cent of cardiovascular diseases in children. The patients' ages ranged from 0.1-15 years. These myocardial diseases included dilated cardiomyopathy (DCM) 45 per cent, acute myocarditis 27.3 per cent, hypertrophic cardiomyopathy (HCM) 18.2 per cent, hypertrophic obstructive cardiomyopathy (HOCM) 8.1 per cent and restrictive cardiomyopathy (RCM) 1.4 per cent. Fifty-six per cent of the patients were female. Congestive heart failure was the most common presenting symptom (75%). Median ejection fraction (EF) of acute myocarditis was 42 per cent (15-79%) which was significantly higher than DCM (33.5%, 10-57%). Serum cardiac troponin T (cTnT) was also significantly higher in acute myocarditis than in DCM (0.08 ng/ml, 0.01-0.16 vs 0.01 ng/ml, 0.01-0.10). Within the follow-up period of 1 year (0.1-5.5 years), the mortality rates were 18.8 per cent, 17.0 per cent, 5.4 per cent and 33.3 per cent in DCM, acute myocarditis, HCM and RCM respectively. Factors associated with the mortality rate in acute myocarditis were admission to ICU and low left ventricular EF at presentation while IVIG administration and cTnT level did not. Conclusion: Primary myocardial diseases are uncommon. Most of the patients had compromised cardiovascular reserve. Admission to ICU and low EF were factors that affected the mortality in acute myocarditis while intravenous immunoglobulin administration did not. Mortality rate in the subacute follow-up period was high in all groups.

**No. 416**

- Authors** : Soongswang J, Sutanthavibul A, Sunsaneevithayakul P, Thitadilok W, Durongpisitkul K, Laohaprasitiporn D, Nana A, Wansanit K, Punlee K, Kangkagate C.
- Title** : Prenatal diagnosis of cardiovascular diseases.
- Source** : Journal of the Medical Association of Thailand. 85:S640-7(Suppl 2), 2002(Aug).
- Keywords** : Prenatal Diagnosis, Cardiovascular Diseases.
- Abstract** : Fetal echocardiography is a safe means to obtain reliable anatomical and hemodynamic data of the fetal heart. The procedure is essential for prenatal

diagnosis of cardiovascular abnormalities. In addition, fetal echocardiography is useful to follow-up the progression, monitoring during treatment and making a plan of treatment especially in life-threatening cardiac conditions. The objective of this study was to find the distribution of indications for fetal echocardiography, fetal cardiac anomalies detected, outcome of the fetuses and to assess the accuracy of the procedure. A retrospective study was done at Siriraj Hospital, Mahidol University, Bangkok, Thailand. Pregnant women whose fetuses had prenatal echocardiographic data and gave birth from January 1999 to December 2001 were included. The total number of pregnant women was 54 cases. The indications for fetal echocardiography were suspicion of fetal cardiovascular disease by the obstetrician 42.6 per cent, family history of congenital heart diseases 14.8 per cent, multiple organ system anomalies 14.8 per cent, chromosomal anomalies 11.1 per cent, hydrops fetalis 9.3 per cent, maternal systemic diseases 5.6 per cent and previous pregnancy with a dead fetus in utero 1.9 per cent. The gestational age at the time of the first fetal echocardiography ranged from 17 to 39 weeks (median 28 weeks). The number of fetal echocardiography done in each case ranged from 1 to 10 (median 1.4). Prenatal diagnosis of the abnormal cardiovascular system in fetuses was found in 19 cases (35.2%). There were abnormal cardiac anatomies in 42 per cent, cardiac tumors or abnormal masses in 37 per cent and rhythm disturbances in 21 per cent. When compared with postnatal echocardiography and/or autopsy finding, fetal echocardiography had a sensitivity of 100 per cent, specificity of 96.3 per cent and accuracy of 97.8 per cent. Conclusion: Fetal echocardiography has good accuracy in the diagnosis of cardiovascular diseases. Obstetrician's suspicion is important in the prenatal diagnosis of heart disease that would have affected the short and long-term outcome of the fetus.

**No. 417**

- Authors** : Soontranan P, Chayachinda D, Thaworanun J.  
**Title** : Position for administering an epidural block using a photograph as a visual aid in cesarean section patients.  
**Source** : Journal of the Medical Association of Thailand.  
85:S830-6(Suppl 3), 2002(Sep).  
**Keywords** : Epidural Block, Cesarean Section Patients.  
**Abstract** : This randomized control trial was performed in 60 obstetric patients scheduled for cesarean section under regional anesthesia. They were randomly allocated into two groups. Group 1, the control group, were positioned by giving verbal instructions. Group 2, the visual-aided group, were positioned by giving verbal instructions plus showing them photographs of the standard position for an epidural block. The nurse anesthetist, who did not know the method used for positioning, was called into the operating room and readjusted the patient's position as necessary, and evaluated the previous positioning as; very good, good or unsatisfactory. The anesthesiologist, who also did not know which method had been used, palpated the patient's interspinous space before and after any adjustment by the nurse anesthetist and recorded the difference in the space width following adjustment, which was categorized into 3 grades; wider, no change, and narrower. The results showed a significantly better initial position using photographs (very good = 73.4%, good = 23.3%, and unsatisfactory = 3.3%) compared to the control group (very good = 3.3%, good = 46.7% and unsatisfactory = 50%),  $p < 0.0001$ . The adjustment of positioning which increased the interspinous width in the visual-aided group (30%) was significantly less than in the control group (56.7%). No change needed in positioning was more common in the study group (60%) than in the control group (36.6%). This meant that visual-aided positioning needed readjustment significantly less than those

positioned by the conventional method. The average time used to identify the epidural space using the loss of resistance technique and the average number of needle insertions in the visual-aided group were less than in the control group, but this was not statistically significant. Successful epidural block in the visual-aided group (96.7%) was higher than in the control group (90%) but this was not statistically significant. We conclude that the photographs of the standard position for epidural block can be use as a visual aid to improve positioning in obstetric patients scheduled for cesarean section.

**No. 418**

**Authors** : Soontranan P, Lertakyamanee J, Somprakit P, Surachetpong S.  
**Title** : A survey of the anesthesia scavenging systems in a teaching hospital.  
**Source** : Journal of the Medical Association of Thailand.  
85:S824-9(Suppl.3), 2002(Sep).

**Keywords** : Anesthesia.

**Abstract** : Pollution by anesthetic gases can be a problem in operating theaters. More than 90 per cent of this pollution can be reduced by using a scavenging system. Such systems increase the complexity, and thus the hazards of administering anesthesia. A case of pneumothorax prompted an investigation of the active scavenging systems currently used in a teaching hospital by using a pre-use check up protocol. Thirty-eight closed-reservoir active scavenging systems were included. Ten systems (26.3%) were assembled incorrectly. All systems passed a negative pressure relief valve test. Seventeen systems (44.7%) failed to pass a positive pressure relief valve test because high pressure (over 10 cmH<sub>2</sub>O) developed during an O<sub>2</sub> flush, but direct measurement of the pressure at the scavenging interface revealed that these defects were caused by a problem with the adjustable pressure limiting (APL) valves, not with the positive pressure relief valves of the system. We suggest that routine pre-use check up to gether with regular maintenance of equipment should be emphasized and all personnel should be encouraged to learn more about safety precautions.

**No. 419**

**Authors** : Sriprapaporn J, Toopmongkol C, Satayaban B, Chantamoon N.  
**Title** : Technetium-99m methoxyisobutylisonitrile imaging in the follow-up of differentiated thyroid carcinoma.  
**Source** : Annals of the Academy of Medicine, Singapore. 31(2):195-8, 2002(Mar).  
**Keywords** : Technetium-99m Methoxyisobutylisonitrile, I-131 Total-Body Scan, Differentiated Thyroid Carcinoma.

**Abstract** : **OBJECTIVE:** To evaluate the potential of technetium-99m methoxyisobutylisonitrile (Tc-99m MIBI) imaging as an alternative to I-131 total-body scan (I-131 TBS) for the follow-up of patients with differentiated thyroid carcinoma (DTC). **PATIENTS AND METHODS:** We performed 87 Tc-99m MIBI imaging studies in 76 DTC patients who had total or near-total thyroidectomy followed by a radioactive iodine ablation while receiving thyroxine therapy. The final diagnosis was correlated with I-131 TBS, serum thyroglobulin (Tg), other conventional imaging modalities, clinical outcome, and/or pathological report. **RESULTS:** Seventy-six recurrent tumours or metastatic conditions in 58 DTC patients were detected. The overall findings of Tc-99m MIBI showed 72% sensitivity, 100% specificity and 77% accuracy. The figures for I-131 scan were 57%, 100% and 66%, respectively. When classifying upon tumour locations, Tc-99m MIBI imaging had sensitivity of 79% for cervical, 50% for mediastinal, 65% for skeletal and 69% for pulmonary metastases and the corresponding values for I-131 TBS were 33%, 67%, 94% and 75%, respectively. Furthermore,

Tc-99m MIBI could detect only 44% of thyroid remnants demonstrated by radioiodine scan. CONCLUSIONS: Tc-99m MIBI imaging is more sensitive than I-131 TBS in detecting tumours in the neck but less sensitive for metastasis elsewhere, as well as thyroid remnants. Therefore, Tc-99m MIBI imaging should not substitute but rather complement I-131 TBS for evaluation of DTC patients post-radioiodine ablation.

**No. 420 (168)**

- Authors** : Srisaimanee N, Chairprasert A, Gengvinij N, Kunakorn M, Prayoonwivat N.  
**Title** : Evaluation of in-house optimized semi-nested PCR and EIA for direct detection of mycobacterial DNA in CSF  
**Source** : Asian Pacific Journal of Allergy and Immunology. 20(4):267-277, 2002.  
**Keywords** : Polymerase Chain-Reaction, 16s Ribosomal-Rna, Tuberculous Meningitis, Nontuberculous Mycobacteria, Clinical-Samples, Diagnosis, Amplification, Identification, Assay, Reamplification.  
**Abstract** : A rapid and correct diagnosis of mycobacterial infections is important for effective patient treatment. Semi-nested-PCR with FI-16 SOL, 16SOR and 16SNSR primers based on the 16S rRNA gene, under optimized conditions, can detect 499 bp amplified products from all tested mycobacteria. The assay could detect as little as 100 fg of mycobacterial DNA except for rapid growing mycobacteria, whose detection limits ranged from 1 ng to 10 pg. The specificities of the capture probes were assessed with 96 mycobacterial strains (22 species) and 33 nonmycobacterial strains (30 species). The specificities of pAIII1, pTbc1 and pMar1 were 94%, 93% and 82%, respectively, and that of pAvi1, plnt1, pChe1 and pFor1 were 100%. The pTbc1 and pAvi1 were tested with DNA from 108 CSF samples, and the sensitivity and specificity of the detection method were 56% and 84% compared to culture and patient histories. The assay should be used for rapid detection and concurrent identification of slow growing mycobacteria without parallel conventional culture verification.

**No. 421**

- Authors** : Srisuparp P, Heitschmidt M, Schreiber MD.  
**Title** : Inhaled nitric oxide therapy in premature infants with mild to moderate respiratory distress syndrome.  
**Source** : Journal of the Medical Association of Thailand. 85:S469-78(Suppl 2), 2002 (Aug).  
**Keywords** : Premature Infants, Respiratory Distress Syndrome, Inhaled Nitric Oxide.  
**Abstract** : Inhaled nitric oxide (iNO) therapy has been demonstrated to acutely improve oxygenation in preterm infants with severe pulmonary disease. Administration of iNO to the premature infants with less severe pulmonary illness has not yet been studied extensively. Therefore, the authors performed a pilot study enrolling thirty-four premature infants with respiratory distress syndrome (RDS) within 72 hours of age, birth weight between 500-2,000 g, whose oxygenation indexes exceeded our birthweight-specific criteria. Infants were randomly assigned to either treatment with (iNO group; n = 16) or without (control group; n = 18) iNO. Inhaled NO was started at 20 ppm and weaned to 5 ppm over 24-48 hours. Routine cranial ultrasonography was performed and the occurrence of intraventricular hemorrhage (IVH) was interpreted by an attending pediatric radiologist unaware of the treatment group assignment. The study showed that the two groups were of similar birth weight (mean+/-SEM): control 901+/-73 g vs iNO 874+/-70 g; and gestational age: control 27.2+/-0.5 wk vs iNO 26.8+/-0.5 wk. Other baseline parameters between the two groups were also similar. The mean ages of the infants at the time of entry were 11.7+/-2.2 and

8.3±0.9 hours in the controls and iNO group. The entry oxygenation index (OI) did not differ between the two groups: control 11.9±2.2 vs iNO 10.8±1.50. After 30 minutes of iNO therapy, there was a 50 per cent increase in partial pressure of oxygen tension (PaO<sub>2</sub>) and 15 per cent reduction in OI, (p = 0.02 and p = 0.04 vs baseline, respectively). No statistical difference in the incidence of significant IVH (Grade III and IV) was detected: control 27.8 per cent; iNO 25.0 per cent. The incidence of other acute complications as well as early neonatal death, were comparable between the groups. The mean methemoglobin concentration was 1.2±0.5 per cent. In conclusion, these preliminary data suggest that iNO, as used in this protocol, acutely improves oxygenation without increasing significant IVH in premature infants with mild to moderate RDS. These important findings serve to justify further study of the efficacy of iNO on long term pulmonary outcome and mortality in this group of infants.

**No. 422**

- Authors** : Sriussadaporn S, Srimuninnimit V, Ploybutr S, Tanlakit M, Chearskul S, Chakrapee-Sirisuk S, Nitiyanant W, Vannasaeng S, Sinlarat P, Vichayanrat A.
- Title** : Association between estrogen receptor concentration in breast cancer tissue and bone mineral density.
- Source** : Journal of the Medical Association of Thailand. 85(3):327-33, 2002(Mar).
- Keywords** : Estrogen Receptor, Breast Cancer, Bone Mineral Density.
- Abstract** : Both bone and the breast are major target tissues of estrogen actions. The biological actions of estrogen depend on the interaction between estrogen and estrogen receptors (ER) in the target tissues. Therefore, ER concentration in tissues such as breast cancer might be associated with the amount of bone mass. The present study was aimed to examine whether there is a relationship between ER concentration in breast cancer tissue (ER-BCA) and bone mineral density (BMD). Forty-seven pre-menopausal and 34 post-menopausal women with newly diagnosed breast cancer were studied. The ER-BCA ranged from 0 to 339 fmol/mg cytosol protein (mean ± SD = 68.6 ± 97.0). Pearson's correlation analyses showed that ER-BCA negatively correlated to BMD of the spine (r = -0.251, p = 0.024), forearm (r = -0.341, p = 0.002), hip (r = -0.373, p = 0.001) and total body (r = -0.317, p = 0.004) in all 81 women. In 47 pre-menopausal women, the ER-BCA negatively correlated to the hip (r = -0.455, p = 0.001) and total body (r = -0.395, p = 0.006) but not to the spine and forearm BMD. Whereas, in 34 post-menopausal women, the ER-BCA negatively correlated to forearm BMD (r = -0.399, p = 0.019). Stepwise multiple regression analyses showed that the ER-BCA independently correlated to hip BMD in all 81 women (r = -0.373, p < 0.01) and in pre-menopausal women (r = -0.486, p < 0.001) and independently correlated to forearm BMD in post-menopausal women (r = -0.399, p < 0.05). The results of this study suggest that the presence of high estrogen receptor concentration in breast cancer tissue might induce a deleterious effect on bone mass particularly in pre-menopausal women.

**No. 423**

- Authors** : Srivannaboon S.
- Title** : Relationship between corneal thickness and level of myopia.
- Source** : Journal of the Medical Association of Thailand. 85(2):162-6, 2002(Feb).
- Keywords** : Corneal Thickness, Myopia.
- Abstract** : A retrospective study of 533 eyes, which underwent complete pre-operative evaluation for refractive surgery, was done. Regression Analysis was performed to find the correlation between corneal thickness and level of myopia and between

corneal thickness and corneal curvature. There was statistically significant correlation between corneal thickness and level of myopia ( $p = 0.039$ ) and also in corneal thickness and corneal curvature ( $p = 0.04$ ). No clinical correlation was demonstrated ( $R^2 = 0.014$  and  $R^2 = 0.0153$ , respectively). There was no clinical correlation between corneal thickness and level of myopia and also between corneal thickness and corneal curvature.

**No. 424**

- Authors** : Stephens HAF, Klaythong R, Sirikong M, Vaughn DW, Green S, Kalayanaroj S, Endy TP, Libraty DH, Nisalak A, Innis BL, Rothman AL, Ennis FA, Chandanayingyong D.
- Title** : HLA-A and -B allele associations with secondary dengue virus infections correlate with disease severity and the infecting viral serotype in ethnic Thais.
- Source** : Tissue Antigens. 60(4):309-318, 2002.
- Keywords** : HLA, Class I, Allele, Associations, Secondary, Dengue, Virus, Infections.
- Abstract** : Little is known of the role of classical HLA-A and -B class I alleles in determining resistance, susceptibility, or the severity of acute viral infections. Appropriate paradigms for immunogenetic studies of acute viral infections are dengue fever (DF) and dengue hemorrhagic fever (DHF). Both primary and secondary infections with dengue virus (DEN) serotypes 1, 2, 3 or 4, can result in either clinically less severe DF or the more severe DHF. In secondary exposures, a memory response is induced in immunologically primed individuals, which can both clear the infecting dengue virus and contribute to its pathology. In a case-control study of 263 ethnic Thai patients infected with either DEN-1, -2, -3 or -4, we detected HLA class I associations with secondary infections, but not in immunologically naive patients with primary infections. HLA-A\*0203 was associated with the less severe DF, regardless of the secondary infecting virus serotype. By contrast, HLA-A\*0207 was associated with susceptibility to the more severe DHF in patients with secondary DEN-1 and DEN-2 infections only. Conversely, HLA-B\*51 was associated with the development of DHF in patients with secondary infections, and HLA-B\*52 was associated with DF in patients with secondary DEN-1 and DEN-2 infections. Moreover, HLA-B44, B62, B76 and B77 also appeared to be protective against developing clinical disease after secondary dengue virus infection. These results confirm that classical HLA class I alleles are associated with the clinical outcome of exposure to dengue virus, in previously exposed and immunologically primed individuals.

**No. 425**

- Authors** : Suchartwatnachai C, Theppisai U, Jirapinyo M.
- Title** : Screening for hypothyroidism at a menopause clinic.
- Source** : International Journal of Gynaecology and Obstetrics. 77(1):39-40, 2002(Apr).
- Keywords** : Hypothyroidism, Menopause.

**No. 426**

- Authors** : Sudoyo H, Suryadi H, Lertrit P, Pramoonjago P, Lyrawati D, Marzuki S.
- Title** : Asian-specific mtDNA backgrounds associated with the primary G11778A mutation of Leber's hereditary optic neuropathy.
- Source** : Journal of Human Genetics. 47(11):594-604 2002.
- Keywords** : Human Mtdna, Mtdna Mutations, Leber's Hereditary Optic Neuropathy, Mtdna Snp, Mtdna Haplotypes.
- Abstract** : We studied 19 patients of Southeast Asian (SEA) ethnic ancestry with Leber's hereditary optic neuropathy (LHON) to investigate the mtDNA haplotypes associated with the primary mutation(s). Eighteen patients carried a

mitochondrial DNA (mtDNA) G11778A mutation (Arg340His in the respiratory complex I ND4 subunit), while one had a T14484C mutation (Met64Val in the ND6 subunit). One patient had a class 11 LHON mtDNA mutation, G3316A. Sequencing data of the ND genes showed many single-nucleotide polymorphisms (62 SNPs in 17 individuals; 10 LHON patients and 7 normal controls) not previously reported in Europeans or Japanese. The SEA G11778A LHON mutation was associated mostly with two mtDNA haplogroups, M (47%) and a novel lineage, characterized by the gain of a 10394 DdeI site but absence of the 10397 AluI site, designated BM (37%). A significant association was observed between one SNP, A10398G, resulting in a Thr114Ala substitution in the ND3 subunit, and the primary LHON mutation. This SNP also characterizes haplogroup J, with which the European LHON 11778 and 14484 mutations show preferential association. The combination of A10398G and other SNPs, specific for the haplogroups J, M, or BM, might act synergistically to increase the penetrance of the LHON mutations, thus allowing their detection.

**No. 427**

- Authors** : Sujijantararat P, Chotivichit A.  
**Title** : Surgical reconstruction of exstrophy-epispadias complex: Analysis of 13 Patients.  
**Source** : International Journal of Urology. 9 (7): 377-384, 2002.  
**Keywords** : Bladder Exstrophy, Epispadias, Exstrophy-Epispadias Complex, Urethra  
**Abstract** : Background : Because exstrophy-epispadias complex is uncommon and satisfactory surgical reconstruction outcomes are difficult to achieve, the surgical repairs by one surgeon (PS) were analysed over a 14-year period. Methods: Retrospective analysis was performed on 13 patients with the complex who underwent surgery between January 1986 to August 2000. Cosmesis and continence were evaluated. Complications including wound dehiscence and urethrocutaneous fistula were reported. Results: Of six patients with classical exstrophy who underwent functional bladder closure, all had good cosmesis except one who had partial dehiscence. Four patients with isolated epispadias had satisfactory cosmesis. Urethrocutaneous fistula was found in one boy in the classical exstrophy group. Continence was achieved in three out of four patients who had bladder neck reconstruction. One girl whose bladder neck was severely obstructed after functional bladder closure, had continent catheterizable stoma. Conclusion: Functional bladder closure yielded satisfactory cosmetic outcome. Bladder neck reconstruction made the patient dry in 75% of cases.

**No. 428**

- Authors** : Sukpanichnant S, Sivayathorn A, Visudhiphan S, Ngowthammatas W.  
**Title** : Multicentric Castleman's disease, non-Hodgkin's lymphoma, and Kaposi's sarcoma: A rare simultaneous occurrence.  
**Source** : Asian Pacific Journal of Allergy and Immunology. 20(2):127-133, 2002.  
**Keywords** : Primary Effusion Lymphoma, Malignant-Lymphoma, Node Hyperplasia, Interleukin-6, Herpesvirus, Features, Variant, Cells.  
**Abstract** : A rare simultaneous occurrence of multicentric Castleman's disease, non-Hodgkin's lymphoma, and Kaposi's sarcoma was diagnosed in a 70-year-old man who presented with fever, polyarthralgia, weight loss, vascular purpura, anemia, generalized lymphadenopathy, and hepatosplenomegaly. He had no risk of HIV infection and serological tests for HIV were negative twice, but a low number of T-cells and a reversed CD4/CD8 ratio were observed. During

hospitalization, he developed Kaposi's sarcoma at the right sole. Lymph node biopsies revealed multicentric Castleman's disease together with a large B-cell lymphoma, which showed monotypic IgM-lambda lymphocytes. To our knowledge, this is the first report in which systemic manifestations of all three diseases occurred simultaneously prior to any specific treatment. The altered immune status and human herpesvirus-8 infection might have played a role in the pathogenesis of this occurrence.

**No. 429**

- Authors** : Suksompong S, Prakanratana U, Chumpathong S, Sriyoschati S, Pornvilawan S.  
**Title** : Neuropsychological alterations after coronary artery bypass graft surgery.  
**Source** : Journal of the Medical Association of Thailand. 85:S910-6(Suppl.3), 2002(Sep).  
**Keywords** : Coronary Artery Bypass, TMSE.  
**Abstract** : **OBJECTIVE:** To evaluate neuropsychological dysfunction in patients following elective coronary artery bypass graft surgery at Siriraj Hospital. **PATIENTS AND METHOD:** One hundred and ten patients who were scheduled for elective coronary artery bypass graft surgery were included in this study. We used the Thai Mental State Examination (TMSE) in order to detect the presence of cognitive impairment after coronary artery bypass graft surgery. The examinations were conducted on two consecutive occasions; first preoperatively, the day before surgery, secondly on the third - fifth postoperative day. The patients' clinical characteristics were assessed perioperatively. **RESULTS:** The overall occurrence of neuropsychological deficit was 18.18 per cent. Predictors of neuropsychological dysfunction were older age and preexisting disease such as hypertension, hypercholesterolemia and renal insufficiency. Other risk factors such as gender, history of congestive heart failure, myocardial infarction, diabetes mellitus, dysrhythmia, cardiopulmonary bypass time, hemoglobin during cardiopulmonary bypass <7 g/dl, hemoglobin on admission to surgical cardiac care unit <10 g/dl, and atrial fibrillation arising after surgery were not significant. **CONCLUSION:** Neuropsychological impairments after coronary artery bypass graft surgery are relatively common. This study did not find an increased incidence with respect to gender as other studies have done. However, long-term follow-up of these patients would be very valuable.

**No. 430**

- Authors** : Sumboonnanda A, Malasit P, Tanphaichitr VS, Ong-ajyooth S, Petrarat S, Vongjirad A.  
**Title** : Renal tubular dysfunction in alpha-thalassemia.  
**Source** : Pediatric Nephrology. 18(3):257-260, 2003.  
**Keywords** : Alpha-Thalassemia, Renal Tubular Function, Malondialdehyde, Splenectomy.  
**Abstract** : Shortened red cell life span and excess iron cause functional and physiological abnormalities in various organ systems in thalassemia patients. In an earlier study, we showed that beta-thalassemia patients have a high prevalence of renal tubular abnormalities. The severity correlated with the degree of, anemia, being least severe in patients on hypertransfusion and iron chelation therapy, suggesting that the damage might be caused by the anemia and increased oxidation induced by excess iron deposits. This study was designed to define the renal abnormalities associated with alpha-thalassemia and to correlate the renal findings with clinical parameters. Thirty-four pediatric patients (mean age 8.2+/-2.8 years) with Hb H disease or Hb H/Hb CS were studied. Ten patients (group 1) were splenectomized, with a mean duration post splenectomy of 3.5+/-1.4 years; 24 patients (group 2) had intact spleens. The results were compared with 15 normal children. Significantly higher

levels of urine N-acetyl-beta-D-glycosaminidase, malondialdehyde (MDA), and beta(2)-microglobulin were found in both groups compared with normal children. An elevated urine protein/creatinine ratio was recorded in 60% of group 1 and 29% of group 2. Two patients (5.9%), 1 in each group, had generalized aminoaciduria. We found proximal tubular abnormalities in alpha-thalassemia patients. Increased oxidative stress, possibly iron induced, may play an important role, since urine MDA levels were significantly increased in both groups of patients.

**No. 431**

- Authors** : Sumboonnanda A, Srjai K, Vongjirad A, Suntornpoch V, Parichatikanond P.  
**Title** : Percutaneous renal biopsy in children.  
**Source** : Journal of the Medical Association of Thailand. 85:S755-61(Suppl 2), 2002(Aug).  
**Keywords** : Children, Percutaneous Renal Biopsies.  
**Abstract** : The authors studied the percutaneous renal biopsies performed in the Department of Pediatrics, Siriraj Hospital from January 2000 to March 2001 in order to evaluate the safety and benefit of the procedure. Eighty-five patients (90 episodes) were included in the study, aged 7.8+/-3.7 year (range 16 months to 16 years), with a male to female ratio of 1.2:1. Nephrotic syndrome (42.3%) and systemic lupus erythematosus (23.5%) were the two most common indications for biopsy. The kidney was localized by ultrasound prior to the procedure in nearly all cases (97.7%). Premedication with Ketamine was adequate in most patients (91.1%). A modified 13 G Vim-Silverman needle was used to obtain 1-4 biopsy cores. The mean number of glomeruli obtained was 44.0+/-29.9, with failure to obtain renal tissue in 6 episodes (6.6%). Percutaneous biopsy was performed twice in one patient without success and the patient eventually underwent an open biopsy. The most common complication was hematuria (74.4%), of these, gross hematuria was found in 23.3 per cent. Blood transfusion was needed in 2 patients, one of them also needed embolization to control bleeding. Transient hypotension occurred in 1 patient. Transient hypertension occurred in 6 episodes (6.6%). Muscle twitching occurred in 2 episodes and was treated with diazepam intravenously. Hypertension and muscle twitching only occurred in those who received ketamine. The Clinical Benefit Score was 2 (information yielding a definite diagnosis and/or prognosis, alternatively allowing a change in, or support of, therapy) in 89.4 per cent. It was concluded that the present practice of renal biopsy is safe, with high clinical benefit score. It remains to be studied whether an ultrasound guidance biopsy with a newer biopsy device will lower the incidence of complications even further.

**No. 432**

- Authors** : Suraseranivongse S, Chowwanayotin S, Pirayavaraporn S, Kongsayreepong S, Gunnaleka P, Kraiprasit K, Petcharatana S, Montapaneewat T.  
**Title** : Effect of bupivacaine with epinephrine wound instillation for pain relief after pediatric inguinal herniorrhaphy and hydrocelectomy.  
**Source** : Regional Anesthesia and Pain Medicine. 28(1):24-28, 2003.  
**Keywords** : Bupivacaine, Epinephrine, Instillation, Herniorrhaphy, Hydrocelectomy.  
**Abstract** : Background and objectives: To evaluate the effect of a 20- or 60-second instillation period using 0.5% bupivacaine with epinephrine for pain relief after pediatric inguinal herniorrhaphy and hydrocelectomy. Methods: in a randomized, double-blind study, 103 children (aged 1 to 12 years, American Society of Anesthesiologists [ASA] physical status I or II) were allocated into 4 groups after induction of anesthesia. Group 1: normal saline 0.25 mL/kg

instilled, which remained in the wound for 20 or 60 seconds before wound closure. Group 2: 0.25 mL/kg 0.5% bupivacaine with epinephrine 5 µg/mL instilled, which remained in the wound for 20 seconds. Group 3: the same quantity and dose of drug 2 instilled as group, but remained in the wound for 60 seconds. Group 4: an ilioinguinal and iliohypogastric block performed before operation using 0.5 mL/kg 0.25% bupivacaine with epinephrine. The Children's Hospital of Eastern Ontario Pain Scale (CHEOPS) and Aldrete-Kroulik recovery scores were used to monitor postoperative pain and recovery status. Analgesic was given when the CHEOPS score was  $\geq 7$  despite other supportive therapy. Results: The number of patients requiring analgesics within 2 hours in group 1 (73.1%) was more than groups 2, 3, and 4 (23.1%, 20.8%, and 16%, respectively,  $P < .001$ ). The median time to first analgesic in group 1 (50 minutes) was also less than groups 2, 3, and 4 (420, 525, and 425 minutes, respectively,  $P < .0001$ ). Conclusion: 0.5% Bupivacaine with epinephrine for as short an instillation period as 20 or 60 seconds can provide a good analgesic alternative after hemiorrhaphy and hydrocelectomy in pediatric patients. All studied blocks had comparable duration of action.

**No. 433**

- Authors** : Suraseranivongse S, Kraiprasit K, Petcharatana S.  
**Title** : Postoperative pain assessment in ambulatory pediatric patients by parents.  
**Source** : Journal of the Medical Association of Thailand. 85:S917-22(Suppl.3), 2002(Sep).  
**Keywords** : Pain, Ambulatory Pediatric.  
**Abstract** : OBJECTIVES: This study aimed to assess 1) agreement and correlation of postoperative pain scores rated by nurses and parents 2) the difference between the pain scores (CHEOPS and FLACC) as rated by nurses and parents 3) effects of parental education on pain rating 4) the ease with which parents could score CHEOPS and FLACC. METHODS: Sixty-nine children, age 1-12 years (median 3.7, IQR 2-6.85 years) underwent herniorrhaphy and hydrocelectomy under general anesthesia and 69 parents, age 20-65 years (median 32, IQR 37.5-38.5 years) were enrolled in the study. Parents were trained how to score pain using CHEOPS and FLACC by using a videotape of children's pain behaviors. One of 2 nurses who were tested for inter-rater reliability ( $ICC > 0.9$ ) rated the postoperative pain of a child in the recovery room at the same time with his parent by using CHEOPS and FLACC. RESULTS: Agreement (ICC) and Correlation Coefficient (r) between nurses and parents were 0.934-0.979 and 0.898-0.969 respectively ( $p < 0.001$ ). ICC and r were not influenced by parental education. Pain scores rated by parents using either CHEOPS or FLACC showed no difference between the scoring systems ( $p = 0.544, 0.166$ ). CONCLUSION: Thai parents could be easily trained how to use pain scales. Parental rating was not different from nurse rating. The agreement and correlation between parents and nurses were very high. The ease of using CHEOPS was not different from FLACC.

**No. 434**

- Authors** : Susiva C, Keeratiruangrong S.  
**Title** : Outcome of pediatric oncologic patients in the respiratory intensive care unit: Siriraj Hospital.  
**Source** : Journal of the Medical Association of Thailand. 85:S564-8(Suppl 2), 2002 (Aug).  
**Keywords** : Pediatric Oncologic, Respiratory Intensive Care Unit.  
**Abstract** : OBJECTIVES: To review the characteristics and outcome of patients with childhood malignancy requiring respiratory intensive care treatment and to

assess the outcome of these patients. DESIGN: Retrospective review of 22 oncological patients admitted to the pediatric respiratory intensive care unit between January 1, 1996 and December 31, 1998 (total 3 years.) RESULTS: The overall survival at discharge from the intensive care unit was 10 out of 22 (45%). The mean age of the patients was 4 years 5 months old (range 1 month to 14 years). Male: Female ratio was 1.2:1.21 patients had fever. All patients with a systemic or respiratory infective illness were neutropenic with a positive hemoculture in 17 out of 21 (81%) and 10 out of 20 (50%), respectively. The most common organisms detected were coagulase negative Staphylococcal aureus and Escherichia Coli. Sputum culture in the respiratory failure group was positive in 3 out of 7 patients, all of them grew Pseudomonas aeruginosa. Antibiotics were given to all oncological patients presenting with fever. The most common antibiotics administered were Ceftazidime, Amikacin and Imipenem. Fourteen patients needed mechanical ventilation. 11 of these 14 patients had respiratory tract infections, 1 patient had acute respiratory distress syndrome and the remainder were in a coma as a result of brain metastasis. Only 2 of them survived. The mean duration of stay in the respiratory intensive care unit was 10.9 days. CONCLUSIONS: There has been an improvement in the survival of oncology patients admitted to the intensive care unit especially for those with either a systemic or respiratory infection. Early and full intensive care treatment should be provided for these patients in order to improve the outcome.

**No. 435**

- Authors** : Sutthent R, Chokephaibulkit K, Piyasujabul D, Vanprapa N, Roogpisuthipong A, Chaisilwatana P.
- Title** : Effect of perinatal short-course zidovudine on the clinical and virological manifestations of HIV-1 subtype E infection in infants.
- Source** : Journal of Clinical Virology. 25(1):47-56, 2002.
- Keywords** : Hiv-1, Perinatal Transmission, Zdv Short Course Prophylaxis, Subtype E.
- Abstract** : Background : The perinatal short-course zidovudine (ZDV) chemoprophylaxis that can reduce HIV-1 vertical transmission by 51% has been widely practiced in developing countries such as Thailand because of its simpler and less cost. Objectives: To investigate the effects of short-course regimen of oral ZDV for prophylaxis of HIV-1 subtype E vertical transmission among 'break-through' HIV-1 infected infants. Study design: The study analyzed clinical and virological outcomes of 80 infants, whose mothers received ZDV prophylaxis starting at 36 weeks gestation (group Z) and 37 infants whose mothers never received anti-retroviral drugs (group C), at the ages of 1-2, 4-6, and 12 months. Results: Of the 12 HIV-1 infected infants, 5/7 (71.4%) from group Z and 1/5 (20%) from group C progressed to a symptomatic clinical stage by the age 4-6 months. The intersample nucleotide distance of HIV-1 pol reverse transcriptase (RT) sequences of isolates collected at age of 1-2 months from group Z was significantly higher than that from group C (3.34 and 2.92%, P = 0.02). All twelve virus isolates from infected infants were non syncytium inducing (NSI) and macrophage tropic strains; and 5/6 (83.3%) viruses from symptomatic infants were also T-tropic viruses. The symptomatic infants also had significantly higher HIV-1 nucleic acid quantitation than asymptomatic infants. Conclusion: Our results preliminary suggested that infected infants who were perinatally exposed to ZDV may have a more rapid early disease progression with unfavorable viral manifestations than those without exposure to antiretroviral drug.

**No. 436**

- Authors** : Sutthent R, Gaudart N, Chokpaibulkit K, Tanliang N, Kanoksinsombath C, Chaisilwatana P.
- Title** : p24 antigen detection assay modified with a booster step for diagnosis and monitoring of human immunodeficiency virus type 1 infection.
- Source** : Journal of Clinical Microbiology. 41(3):1016-1022, 2003.
- Keywords** : Heat-Denatured Plasma, Linked-Immunesorbent-Assay, Hiv-1 Rna, Antiretroviral Therapy, Viral Load, Infants, Complex, Aids, Subtypes, Thailand.
- Abstract** : We modified a p24 antigen enzyme-linked immunosorbent assay as a method for diagnosis and monitoring of human immunodeficiency virus type 1 (HIV-1) subtype E infection. This modified assay is based on the use of preheated immune complex dissociation combined with a booster step using a regular Vironostika HIV-1 p24 antigen assay (bioMerieux) to decrease the lower limit of p24 antigen detection from 10 pg/ml (lower limit achievable when using a regular p24 antigen assay) to 0.5 pg/ml (100 virions/ml) by the new method. The correlation between the values obtained by the HIV-1 RNA (Amplicor HIV-1 Monitor) assay and the p24 antigen assay modified with a booster step antigen assay in 160 frozen plasma samples with known viral load and 80 blind fresh plasma samples by Spearman rank were 0.671 ( $R-2 = 0.450$ ;  $P < 0.01$ ) and 0.782 ( $R-2 = 0.612$ ;  $P < 0.01$ ). During antiretroviral treatment, the change of p24 antigen level at greater than or equal to 0.5 log correlated well with the level of HIV-1 in plasma. In order to improve the early diagnosis of HIV-1 infection in 121 infants born to HIV-1-infected mothers, a heat-denatured plasma p24 antigen assay modified with a booster step was compared with DNA-PCR and HIV RNA (nucleic acid sequence-based amplification) assays. The sensitivity of the antigen test modified with a booster step was similar to that of the HIV-1 RNA (NASBA QL) assay and better than that of the DNA-PCR assay (100 versus 61.90%) for subjects 1 to 2 months old. The overall results from this study might renew interest in p24 antigen detection as an easily affordable alternative method for diagnosis of HIV-1 infection and monitoring of disease progression in developing countries.

**No. 437**

- Authors** : Sutthent R, Kanoksinsombat C, Horthongkham N, Louisirirochanakul S, Auewarakul P, Kantakamalakul W.
- Title** : Recombinant envelope protein of HIV-1 subtype E as antigen in HIV-1 antibody detection enzyme immunoassay.
- Source** : Southeast Asian Journal Trop Med Public Health. 33(2):288-96, 2002.
- Keywords** : HIV-1 subtype E, HIV-1, Enzyme Immunoassay, Escherichia Coli.
- Abstract** : In order to develop a reliable and inexpensive serodiagnostic method to be used for anti-HIV antibody detection in Thailand, recombinant envelope (TM or gp41 subunit) protein of HIV-1 subtype E was produced from prokaryotic cell (Escherichia coli) as the source of antigen in enzyme immunoassay (TE diagnostic EIA kit). HIV-1 gp41 subunit of subtype E was successfully expressed in E. coli in the form of polyhistidine-tagged proteins, comprising of rgp41A (601 bases N-terminal half of TM or 25kDa) and rgp41B (560 bases C-terminal half of TM or 24 kDa) by using an expression vector, pBAD/His C. The amount of protein, dilution of sera, and anti-human IgG labeled HRP used in the EIA test optimized by a checker board titration of the protein and seropositive or seronegative sera, were 5.0 microg/ml, 1:300, and 1:4,000, respectively. The blinded test evaluation of TE-diagnostic EIA in 500 seropositive and 500 seronegative sera which have been simultaneously tested

by two available commercial kits and compared with our TE diagnostic EIA, gave 99.6% sensitivity and specificity. The other known genetic subtypes sera such as subtype A (n=5), B (n=9), C (n=4) and D (n=5) were also positive with this EIA. The estimated manufacturer cost per test of rgp41 based anti-HIV antibody detection EIA or TE-diagnostic EIA was about 15 baht. This recombinant envelope (gp41 or TM) protein from HIV-1, which can be produced in large quantities without any hazards from growing the virus and has lower cost to produce anti-HIV antibody serological diagnostic kit, should be considered as an HIV screening test in Thailand.

**No. 438**

- Authors** : Sutthent R, Sumrangsarp K, Wirachsilp P, Chaisilwattana P, Roongpisuthipong A, Chaiyakul P, Nooma P, Honda M, Warachit P.
- Title** : Diversity of HIV-1 subtype E in semen and cervicovaginal secretion.
- Source** : Journal of Human Virology. 4(5):260-268, 2001.
- Keywords** : Hiv-1, Subtype E, Genital Fluid, Env Gene, Phenotype
- Abstract** : Objectives: To characterize human immunodeficiency virus type 1 (HIV-1) subtype E variants in blood and genital fluid of infected Thai couples. Study Design/Methods: Blood and genital fluid were collected from 30 asymptomatic healthy HIV-1 subtype E infected couples from Bangkok, Thailand from 1995 to 1998. Results: All 60 viruses in blood samples were identified as subtype E by heteroduplex mobility assay. The biotype of viruses founded in blood was syncytium-inducing (SI), whereas M-tropic and non-syncytium-inducing (NSI) isolates were predominantly detected in genital fluid. HIV-1 proviral DNA was detected in 43.33% and 56.67%, and viral RNA was detected in 93.33% and 56.67%, of semen (n = 30) and cervicovaginal secretion (n = 30) samples tested, respectively. A higher intersample genetic distance and more positive charge of the V3 loop were found in blood strains composed of genital fluid strains (22.30 +/- 5.92% and 17.96 +/- 6.3%), which was statistically significant (P = 0.003). The env V1-V4 intraperson variation of the HIV-1 subtype E in the blood and genital fluid of each individual was in the range 3.0%-5.7%. We also determined the intrasample variation of HIV-1 from blood and genital fluid by heteroduplex mobility assay. The mean heteroduplex mobility of the HIV-1, V1-V4 region of env gene, in blood (n = 8) and genital fluid (n = 8) was 0.59 +/- 0.06 and 0.74 +/- 0.11 (t test, p = 0.001), respectively. Conclusions: There was genetic and phenotypic compartmentalization of HIV-1 subtype E in blood and genital fluid with the presence of S1 and NSI phenotypic variants as a common property of subtype E isolates from blood and genital fluid, respectively.

**No. 439**

- Authors** : Suwanchinda V, Prakanrattana U, Suksompong S, Kongsayreepong S.
- Title** : Hypothermic circulatory arrest and retrograde cerebral perfusion for aortic surgery at Siriraj Hospital: a preliminary review of anesthetic management.
- Source** : Journal of the Medical Association of Thailand. 85:S801-6(Suppl.3), 2002(Sep).
- Keywords** : Hypothermic Circulatory Arrest, Aortic Surgery Cerebral Perfusion, Anesthesia.
- Abstract** : OBJECTIVE: To evaluate the anesthetic management in patients undergoing aortic surgery cerebral perfusion; with particular emphasis on under hypothermic circulatory arrest and retrograde intraoperative brain protection, blood salvage and postoperative outcomes. MATERIAL AND METHOD: Retrospective case series. Data on medical conditions, anesthesia, surgery and postoperative care from patients who underwent operation between June 1993 and December 1999

were analyzed. RESULTS: There were 53 patients involved in this study. They all received general balanced anesthesia; 70.6 per cent had single-lumen endotracheal intubation, while the remaining required double-lumen endotracheal intubation. The duration of the anesthetic procedure, aortic cross-clamping and circulatory arrest, were 365.58 +/- 89.21, 126.35 +/- 34.64 and 48.35 +/- 19.47 min respectively. The lowest nasopharyngeal and rectal temperature were 17.42 +/- 1.40 degrees C and 21.26 +/- 2.80 degrees C respectively. Thiopental 804.68 +/- 353.93 mg and dexamethasone 14.41 +/- 7.88 mg were administered for brain protection, in addition to retrograde cerebral perfusion; 82.35 per cent received 785.71 +/- 273.86 mg of tranexamic acid and only 23.52 per cent received aprotinin in order to reduce blood loss. However, massive blood replacement therapy was always necessary. In the postoperative period, the patients were ventilated for 39.18 +/- 59.53 h, the length of hospital stay was 14.58 +/- 5.83 d, and the mortality was 13.2 per cent. CONCLUSION: This preliminary data indicate that hypothermic circulatory arrest in aortic surgery is associated with a high mortality rate, despite attempts to provide adequate cerebral protection as well as intraoperative blood salvage.

**No. 440**

- Authors** : Tangwiwat S, Kumphong P, Surasaneewong S, Audchaneeyasakul L, Surachatkumthornkul T, Naksarn M, Tongkumpan P, Napachoti T.
- Title** : Intraocular pressure changes during general anesthesia in children, comparing no mask, undermask and laryngeal mask airway.
- Source** : Journal of the Medical Association of Thailand. 85:S975-9(Suppl.3), 2002(Sep).
- Keywords** : General Anesthesia, Children.
- Abstract** : In a before and after study of 35 children's eyes, we compared the intraocular pressure (IOP) during general anesthesia consisting of 6-8 per cent sevoflurane in 100 per cent oxygen at induction. IOP measurement, blood pressure, oxygen saturation, and heart rate were recorded in patients with an applied face mask while the patient became unconscious and proceeded to surgery. These measurements were compared with those using no face-mask and after insertion of a laryngeal mask airway (LMA). The IOP with an applied face-mask was significantly different from that after insertion of a LMA (12.8 +/- 3.1 and 12.0 +/- 3.3,  $p < 0.05$ ) but not significantly different clinically. We concluded that clinically, the IOP does not change in children given general anesthesia with a correct size of face mask when compared with insertion of an LMA or no face mask.

**No. 441**

- Authors** : Tanphaichitr VS, Chonlasin R, Suwantol L, Pung-Amritt P, Tachavanich K, Yogsan S, Viprakasit V.
- Title** : Effect of red blood cell glucose-6-phosphate dehydrogenase deficiency on patients with dengue hemorrhagic fever.
- Source** : Journal of the Medical Association of Thailand. 85:S522-9(Suppl 2), 2002(Aug).
- Keywords** : Glucose-6-Phosphate Dehydrogenase, Dengue Hemorrhagic Fever.
- Abstract** : Eighty nine males aged 1-13 years diagnosed with dengue haemorrhagic fever (DHF) and admitted to the Department of Pediatrics Siriraj Hospital from March 1998 to April 2000 were included in this study. 17 cases (19.1%) had red blood cell glucose-6-phosphate dehydrogenase (G-6-PD) deficiency and 72 cases (80.9%) had normal G-6-PD enzyme activities. Most of the patients were classified as DHF grade II in severity. 3 of 17 G-6-PD deficient cases had serious complications and all of them had acute intravascular hemolysis

requiring blood transfusions. One of these also had hematemesis, one had azoemia and the other one had renal failure and severe liver failure with hepatic encephalopathy. In the cases without obvious hemolytic or hepatic complications, G-6-PD deficient cases had mildly but significantly higher total bilirubin and indirect bilirubin, as well as a lower hematocrit than those who had normal G-6-PD. Reticulocyte count was low during the acute phase, however, during recovery, the levels were significantly increased in both groups. In the non G-6-PD deficient group, G-6-PD enzyme levels were significantly decreased during the acute phase compared to the normal controls but rose significantly to normal levels during the recovery phase. There were no statistically significant differences in other laboratory data. All patients recovered fully from DHF. The prevalence of G-6-PD deficiency in male patients who had DHF in this study was 19.1 per cent which was higher than the prevalence in a previous study of 12 per cent in Bangkok. This may imply that G-6-PD deficient males suffer more from DHF compared to normal G-6-PD subjects.

**No. 442**

- Authors** : Tanphaichitr VS, Viprakasit V, Veerakul G, Sanpakit K, Tientadaku P.  
**Title** : Homozygous hemoglobin Tak causes symptomatic secondary polycythemia in a Thai boy.  
**Source** : Journal of Pediatric Hematology Oncology. 25(3):261-265, 2003.  
**Keywords** : High-Oxygen-Affinity Hemoglobin, Homozygous Hb Tak, Secondary Polycythemia  
**Abstract** : Secondary polycythemia caused by high-oxygen-affinity hemoglobin is rare in children. Most patients with this condition have asymptomatic erythrocytosis. In this article the authors describe a young boy from Thailand with plethora, hypoxemia, and aggravated respiratory distress following a chest infection. Hematological and molecular studies revealed that the boy is homozygous for Hb Tak, an extended beta-globin variant with high oxygen affinity. This report of a patient who is homozygous for high-oxygen-affinity hemoglobin highlights the clinical significance of this hemoglobin disorder, which has been previously reported in several unrelated families from Southeast Asia.

**No. 443**

- Authors** : Tantiwong A, Nuanyong C, Vanprapar N, Swasdipala P, Chittaphai S.  
**Title** : Benign prostatic hyperplasia in elderly Thai men in an urban community: the prevalence, natural history and health related behavior.  
**Source** : Journal of the Medical Association of Thailand. 85(3):356-60, 2002(Mar).  
**Keywords** : Benign Prostatic Hyperplasia, Elderly, Urban Community.  
**Abstract** : **PROBLEM:** Although benign prostatic hyperplasia (BPH) is a common disease in elderly Thai men the prevalence in the community and its natural history is unknown. **OBJECTIVES:** To determine the prevalence of symptomatic BPH and its natural history. To determine the health related behaviors which have an impact on the voiding symptoms. **MATERIAL AND METHOD:** 879 elderly men aged  $\geq 60$  years from communities around Siriraj Hospital were studied. The International Prostate Symptom Scores (IPSS) and Quality of Life (QOL) scores were evaluated in the participants at the beginning of the study and 1 year later. The overall assessment, complications and health related behaviors were also evaluated. **RESULT:** The prevalence of symptomatic BPH in the community was 41.3 per cent. In terms of overall assessment at 1 year follow-up, symptomatic BPH patients (IPSS 8-35), the rate of "improved", "same" and "worse" was 10.6, 70.2 and 19.2 per cent respectively. The complication rate was about 10 per cent. Three quarters of the elderly men had health related

behavior at risk. CONCLUSION: The prevalence of symptomatic BPH was high. Its natural history was unpredictable and some BPH symptoms may be influenced by their behaviors.

**No. 444**

- Authors** : Tantiwong A, Soontrapa S, Sujjantrarat P, Vanprapar N, Sawangsak L.  
**Title** : The prevalence of prostate cancer screening in Thai elderly.  
**Source** : Journal of the Medical Association of Thailand. 85(4):502-8, 2002(Apr).  
**Keywords** : Prostate Cancer, Elderly.  
**Abstract** : PROBLEM: Prostate cancer is the most common cancer in elderly men in Western countries. In the future, it may be an important problem in Thailand. At present, there is no evidence about the prevalence and the outcome of screening in this disease. OBJECTIVES: To determine the prevalence of prostate cancer in elderly Thai men and to identify the most appropriate screening method for detection of prostate cancer in Thailand. MATERIAL AND METHOD: 928 elderly men from communities around Siriraj Hospital were evaluated for prostate cancer by Digital Rectal Examination (DRE) and/or Prostate Specific Antigen (PSA). Transrectal ultrasound guided biopsy (TRUS-Bx) which is the gold standard for definitive diagnosis was performed in cases with an abnormal DRE and/or PSA. If biopsy could not be performed, intermittent follow-up with DRE and/or PSA were recommended. RESULT: The prevalence of prostate cancer in Thai elderly men in the urban community was more than 0.75 per cent and the prevalence of abnormal DRE and PSA was 8.7 and 17.3 per cent respectively. The Positive Predictive Value (PPV) of both tests was 60 per cent and higher than the PPV of an individual test. A screening program for prostate cancer starting with DRE may be more cost effective. CONCLUSION: The prevalence of prostate cancer, abnormal DRE and abnormal PSA in Thai elderly men were more than 0.75, 8.7 and 17.3 per cent respectively which are comparable to the prevalence in Western countries. It is important that we take an interest in this disease.

**No. 445**

- Authors** : Tassaneetrithep B, Burgess TH, Granelli-Piperno A, Trumpfherer C, Finke J, Sun W, Eller MA, Pattanapanyasat K, Sarasombath S, Birx DL, Steinman RM, Schlesinger S, Marovich MA.  
**Title** : DC-SIGN (CD209) mediates dengue virus infection of human dendritic cells.  
**Source** : Journal of Experimental Medicine. 197(7):823-829, 2003.  
**Keywords** : Receptor, Flavivirus, Lectin, Antigen-Presenting Cells, Virus Receptor.  
**Abstract** : Dengue virus is a single-stranded, enveloped RNA virus that productively infects human dendritic cells (DCs) primarily at the immature stage of their differentiation. We now find that all four serotypes of dengue use DC-SIGN (CD209), a C-type lectin, to infect dendritic cells. THP-1 cells become susceptible to dengue infection after transfection of DC-specific ICAM-3 grabbing nonintegrin (DC-SIGN), or its homologue L-SIGN, whereas the infection of dendritic cells is blocked by anti-DC-SIGN antibodies and not by antibodies to other molecules on these cells. Viruses produced by dendritic cells are infectious for DC-SIGN- and L-SIGN-bearing THP-1 cells and other permissive cell lines. Therefore, DC-SIGN may be considered as a new target for designing therapies that block dengue infection.

**No. 446**

- Authors** : Thapinta D, Jenkins RA, Morgan PA, Chiu J, Naksrisook S, Boenim W, Bussaratid V, Chaddic C, Phonrat B, Sirijongdee N, Sornsathapornkul P, Sontirat A, Srisaengchai P, Suwanarach C, Wongkamhaeng S, Brown AE, Khamboonruang C, Nitayaphan S, Pitisuttithum P, Thongchareon P.
- Title** : Recruiting volunteers for a multisite phase I/II HIV preventive vaccine trial in Thailand.
- Source** : Journal of Acquired Immune Deficiency Syndromes. 30(5):503-513, 2002.
- Keywords** : Hiv Vaccine Trials, Research Participation, Ethical Issues, Motivation, Altruism, Developing Countries, Thailand.
- Abstract** : Factors believed to be predictive of retention through the recruitment and screening processes for preventive HIV trials were investigated in a large multisite phase I/II HIV vaccine trial in Thailand. Retention through recruitment was equal to or greater than in previous smaller trials with similar populations. The data suggested that recruitment proceeded in a stepwise manner with different influences at each step. Demographic and motivational variables were most important in predicting retention in making and keeping screening appointments. Altruistic or mixed altruistic and nonaltruistic motives were associated with greater retention. Laboratory/medical variables appeared to be the main influence on retention during screening, although some volunteers withdrew for different reasons. The frequent presence of mixed (altruistic and nonaltruistic) motives at initial contact suggests that motivation for trials is more complex than has been previously acknowledged.

**No. 447**

- Authors** : Thongpraparn T, Chaudakshetrin P, Buranapong P.
- Title** : Lesson learned from Co-60 accident in Thailand.
- Source** : Australas Phys Eng Sci Med. 25(4):172-4, 2002(Dec).
- Keywords** : Accident, Thailand.
- Abstract** : The causes and consequences of a Co-60 radiation accident in Samutprakarn Province, Thailand, were scrutinized to learn lessons aimed at preventing future radiation accidents. "Orphan sources" may end up in scrapyards. An out-of-use Co-60 medical teletherapy source, left unattended in a disused parking area belonging to a Medical Dealer, was stolen and sold to a scrap dealer in Samutprakarn Province at the end of January 2000. Because of its valuable appearance, a number of workers in the scrap trade who were not aware of radiation hazards managed to dismantle all parts. The Co-60 source was removed and left unshielded among pieces of scrap metal in the yard of the scrap shop. Some workers immediately became sick. Eighteen days later when they went to a local hospital their symptoms were recognized as radiation sickness and the incident was reported to the Office of Atomic Energy for Peace (OAEP) in Thailand. The unshielded source, with an estimated activity of 15.7 TBq (425 Ci), was retrieved soon after by an emergency team and placed in safe storage at the OAEP premises. Ten victims developed radiation sickness symptoms, of which three died soon after the accident. The accident alarmed the public, and has raised national concerns. The accident is similar in some ways to the 1987 radiation accident at Goiania, Brazil, involving a Cs-137 radiotherapy source. If not properly disposed of orphan radiation sources can lead to serious injury or even death. The accident highlights the need for security of spent high activity sources and the importance of regulatory controls.

**No. 448**

- Authors** : Thongtang O, Sukhatunga K, Ngamthipwatthana T, Chulakadabba S, Vuthiganond S, Pooviboonsuk P, Kooptiwoot S, Phattharayuttawat S.
- Title** : Research on development of the manual for self detection of depression in the Thai elderly.
- Source** : Journal of the Medical Association of Thailand. 85(5):545-51, 2002.
- Keywords** : Depression, Elderly.
- Abstract** : The purposes of this study were to develop an effective manual for the early self detection of depression in the Thai elderly, to detect the comorbidity of depression (pattern of drug and alcohol abuse, suicidal idea) and to ascertain the quality of life. A quasi experimental field research methodology (Randomized Control Group Pretest-Posttest Design) was implemented. The sample consisted of 1,390 elderly people in 35 communities from 4 districts surrounding Siriraj Hospital-Bangkok Noi, Bangkok Yai, Taling Chan and Bang Phlat. These areas are the peripheral parts of Bangkok and most of them have extended families. The result showed that: 1. The internal consistency reliability of the nine criteria of the manual for the self detection of depression in the Thai elderly ranged from 0.84 to 0.94. The validity tested by epidemiological methods, disclosed that the sensitivity was 82.14 per cent and the specificity was 97.56 per cent. 2. There was a statistically significant difference in the incidence of depression between the study and the control group ( $p < 0.000$ ); self referred cases = 86.7 per cent and 9.8 per cent respectively. The study group was able to detect depression in 42 days, while the control group did so in 122 days. In addition, in the associated comorbidity, there were differences in the patterns of drug and alcohol abuse, suicidal ideas and quality of life after the experiment. These findings showed a decreasing pattern of self medication for depression, and suicidal ideas and an improvement in the quality of life in the study group.

**No. 449**

- Authors** : Thongtang O, Sukhatunga K, Ngamthipwatthana T, Chulakadabba S, Vuthiganond S, Pooviboonsuk P, Kooptiwoot S, Phattharayuttawat S.
- Title** : Prevalence and incidence of depression in the Thai elderly.
- Source** : Journal of the Medical Association of Thailand. 85(5):540-4, 2002.
- Keywords** : Depression, Elderly.
- Abstract** : Department of Psychiatry, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand. The purposes of this study were to study the prevalence and incidence of depression in elderly Thais. A field survey study was implemented. The sample consisted of 1,713 elderly people in 35 communities from 4 districts surrounding Siriraj Hospital Bangkok Noi, Bangkok Yai, Taling Chun and Bang Plud. These areas are the peripheral part of Bangkok and most of them have extended family. The Thai Geriatric Depression Scale (TGDS) and the Thai Mini Mental State Examination (TMSE) were used as screening tests, for data collection. The prevalence of depression was 12.78 per cent, of which 8.23 per cent had only depressive symptomatology (male 5.43%, female 9.63%) while 4.55 per cent had both depression and cognitive impairment (male 2.8%, female 5.54%). The point incidence (one year) of depression was 7.27 (male 1.58%, female 5.68%). The major contributing factors in depression were financial, poor family relationships and physical illness. The prevention and management of these factors may bring about a better quality of life for the elderly in Thailand.

**No. 450**

- Authors** : Tiewcharoen S, Junnu V.  
**Title** : Distribution of pathogenic *Naegleria* spp in Thailand.  
**Source** : Southeast Asian Journal of Tropical Medicine and Public Health. 32:172-8(Suppl.2), 2001.  
**Keywords** :  
**Abstract** : Research concerning the distribution, isolation, viability, ultrastructure, morphology and immunogenicity of *Naegleria fowleri* has been increasing in Thailand during 1988-2000. The distribution of the organism was carried out from 1985 to 1987 in Si Sa Ket and Ubon Rachathani Provinces, after the first fatal case was reported in Si Sa Ket. Since then in a 1998 survey of *N. fowleri* in stagnant water around industrial areas was carried out in Pathum Thani, Samut Prakan and Lopburi provinces. The results showed that 10% of pathogenic *Naegleria* belonged to species *fowleri* as characterized by morphology and the occurrence of pathogenesis in mice after nasal inoculation. In the same year, Nacapunchai et al (1999) determined the prevalence of amebae in aquatic habitat of human environments in five parts of Thailand during the summer. Fourteen percent of free living *Naegleria* spp were found in both soil and water resources. Recent studies of the ultrastructure, factors affecting the viability and SDS-PAGE electrophoretic patterns of 3 Thai strains of pathogenic *Naegleria* spp indicated their similarities in morphological characteristics of pathogenic reference control, *Naegleria fowleri* CDC VO 3081. Additional study using a genetic approach to species criteria using allozyme electrophoresis had been conducted.

**No. 451**

- Authors** : Tiewcharoen S, Junnu V, Chinabut P.  
**Title** : In vitro effect of antifungal drugs on pathogenic *Naegleria* spp.  
**Source** : Southeast Asian J Trop Med Public Health. 33(1):38-41, 2002.  
**Keywords** : Antifungal Drugs, *Naegleria* Spp.  
**Abstract** : An ameba of the genus *Naegleria* causing fatal meningoencephalitis in human subjects was investigated for its sensitivity to antifungal drugs: amphotericin B, ketoconazole, fluconazole and itraconazole. The efficacy of these antifungal drugs for pathogenic *Naegleria* spp was investigated in three strains isolated from patients who had died of primary amebic meningoencephalitis infection at Siriraj Hospital (1986), Ramathibodi Hospital (1987) and Chachoengsao Hospital (1987). All of the isolates were maintained in axenic culture in the Department of Parasitology, Faculty of Medicine, Siriraj Hospital, Mahidol University, Thailand. The sensitivities of the antifungal drugs (MIC<sub>50</sub>) were: amphotericin B (0.05-0.5 microg/ml), ketoconazole (0.125 microg/ml), fluconazole (0.5-2.0 mg/ml), and itraconazole (10 mg/ml) ( $p < 0.05$ ). It is important to explain that ketoconazole is slightly more effective than amphotericin B because its action is directed of the permeability of the amebic membrane. The amebae were more resistant of fluconazole and itraconazole due to the action of the cytochrome P450 multienzyme (in the case of fluconazole) and the direct effect on heme-iron, blocking cytochrome P450-dependent chitin synthesis (in the case of itraconazole). We conclude that amphotericin B and ketoconazole remain the main drugs with proven activity against pathogenic *Naegleria* spp.

**No. 452 (514)**

- Authors** : Tilokskulchai F, Phatthanasiriwethin S, Vichitsukon K, Serisathien Y.  
**Title** : Attachment behaviors in mothers of premature infants: a descriptive study in Thai mothers.  
**Source** : J Perinat Neonatal Nurs.16(3):69-83, 2002(Dec).  
**Keywords** : Premature infants, Attachment behaviors.  
**Abstract** : Prematurity and the associated maternal-infant separation after birth can affect the attachment process. The role of nurses in facilitating the process of attachment should be based on an understanding of these behaviors. This descriptive study explored the attachment behaviors demonstrated by mothers during their first visit with their premature infant in the neonatal care unit. The results revealed that all mothers demonstrated most attachment behaviors (ie, inspection, facial expression, touching, verbal expression, and eye-to-eye contact) except holding during their first visit. However, some mothers spent little time with their infant. The findings suggest that nurses should encourage mothers to interact with their infants in order to enhance maternal-infant attachment.

**No. 453**

- Authors** : Titapant V, Sirimai K, Roongphornchai S.  
**Title** : Risk factors for birth before arrival at Siriraj Hospital.  
**Source** : Journal of the Medical Association of Thailand. 85(12):1251-7, 2002(Dec).  
**Keywords** : Birth Before Arrival.  
**Abstract** : **OBJECTIVE:** To assess the potential risk factors for birth before arrival at Siriraj Hospital. **STUDY DESIGN:** Prospective case-control study. **SETTING:** Department of Obstetrics & Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University. **SUBJECTS:** The subjects were 320 patients who had delivered at Siriraj Hospital and were divided into two groups. One hundred and sixty patients, who gave birth before admission to the labor room of Siriraj Hospital, were assigned as the study group. The control group consisted of 160 patients who had normal deliveries in the labor room of Siriraj Hospital at the same period of time. **INTERVENTION:** Information was obtained by interviewing the patients. Both the interviewer and the subjects were blinded to each other. The data were analyzed by using logistic regression model and EpiInfo program. **MAIN OUTCOME MEASURE:** Information of antenatal care, socio-economic data, past obstetric history and present data of delivery. **RESULTS:** The six significant risk factors were identified; education level of the patients (odds ratio 6.11), past history of previous delivery (odds ratio 6.18), past history of preterm delivery (odds ratio 4.03), no antenatal care (odds ratio 8.55), unawareness of true labor symptoms (odds ratio 1.89) and present preterm delivery (odds ratio 2.99). **CONCLUSION:** The risk factors identified from this study were low education level, past history of previous delivery, past history of preterm delivery, no antenatal care, unawareness of symptoms of true labor and present preterm delivery. The risk factors from this study should have further study to get more information that can apply to control birth before arrival.

**No. 454**

- Authors** : Toomtong P, Raksakietisak M, Vorakitpokatorn P.  
**Title** : Clinical outcomes of failed extubation in a postoperative intensive care unit.  
**Source** : Journal of the Medical Association of Thailand. 85:S987-92(Suppl.3), 2002(Sep).  
**Keywords** : Failed Extubation, Postoperative Intensive Care Unit.  
**Abstract** : The causes and consequences of failed extubation in postoperative intensive care unit (ICU) patients were prospectively collected by clinical observation

study in the surgical ICU Siriraj Hospital from 1st October 2000 to 31st March 2001. The failure rate was 1.7 per cent (9/477). Patients underwent the following types of surgery: abdominal surgery 66.67 per cent, orthopedic 22.22 per cent, and head-neck surgery 11.11 per cent. Reasons for reintubation were respiratory failure 55.56 per cent (5/9), inadequate cough reflex 22.22 per cent (2/9), congestive heart failure 11.11 per cent (1/9), and acute myocardial infarction 11.11 per cent (1/9). The consequences of failed extubation were worse outcomes:- the average length of stay in these patients increased from 3.67 days to 9.3 days. The mortality rate was 33.33 per cent. Tracheostomy was required in 55.56 per cent. From these observations we conclude that extubation should be performed at the appropriate time for each patient. This will differ according to the patient and his/her circumstances.

**No. 455**

- Authors** : Toomtong P, Vorakitpokatorn P.  
**Title** : Unplanned admission to Siriraj post-anesthetic intensive care unit.  
**Source** : Journal of the Medical Association of Thailand. 85:S1000-9(Suppl.3), 2002(Sep).  
**Keywords** : Post-Anesthetic Intensive Care Unit.  
**Abstract** : OBJECTIVE: Notice of all surgical patients who need access to Siriraj post-anesthetic intensive care unit (ICU) must be given to the ICU in advance by the surgical team. However, there are some patients who present unexpectedly, and we would like to evaluate this unplanned ICU admission as a quality control. PATIENTS AND METHOD: We performed a self-reported study of the patients who were categorized as unplanned for ICU admission over a six-month period from June 1st to November 30th, 2001. We attempted to quantify these patients into small groups in order to learn what the reasons were, where they came from, and how big the anesthesia-related reasons can be. RESULTS: There were 520 admissions to the ICU during study period, and of those 80 were unplanned patients. The major source of these patients is from the operating theaters, followed by the recovery rooms and surgical wards. There were 65 patients admitted because of the cardiopulmonary problems, while 13 patients were admitted for close observations; surgical complications made up another 8 patients. Overall there were 36 unplanned patients because of anesthesia-associated complications. CONCLUSION: These results indicate that the patients who are admitted to the post-anesthetic ICU without prior planning can provide insights of ICU resource management, and the standards of perioperative management in the operating theatres. It definitely offers an opportunity to implement changes in our anesthetic practice. We will continue to monitor the impact of this important indicator.

**No. 456**

- Authors** : Toomtong P, Young JD.  
**Title** : Nitric oxide production by human peripheral blood mononuclear cells.  
**Source** : Annals Academy of Medicine Singapore. 30(3):270-273, 2001.  
**Keywords** : Endotoxin, Fluorescence, Human Mononuclear Cells, L-Arginine, Nitric Oxide Production, SNAP.  
**Abstract** : Introduction: There are conflicting data on the ability of human mononuclear cells to produce nitric oxide (NO). We investigated nitric oxide production from peripheral blood mononuclear cells (PBMs) by using a new sensitive fluorescent indicator. Materials and Methods: PBMs from healthy volunteers were collected, plated in 96-well microplates, and loaded with the fluorescent nitric oxide probe, 4,5-diaminofluorescein diacetate (DAF-2DA). Experiments

were performed in normal control and endotoxin-stimulated PBMs, with and without exogenous L-arginine. The exogenous nitric oxide donor S-nitroso-N-acetyl-penicillamine (SNAP) was used as a positive control. Fluorescence intensity was measured with a fluorescence microplate reader. Results: Nitric oxide production by human PBMs can be demonstrated by the use of the fluorescent indicator, DAF-2DA, in both control and endotoxin-stimulated conditions. Nitric oxide production was independent of the concentration of exogenous L-arginine. The addition of endotoxin did not change nitric oxide production. PBMs treated with SNAP showed a concentration dependent increase in fluorescence. Nitric oxide production over 5 hours was constant and identical in both control and stimulated groups. Conclusion: This fluorescent indicator technique is useful for the study of NO production by human PBMs. Nitric oxide production by PBMs was independent of exogenous L-arginine concentration and was not affected by endotoxin.

**No. 457**

- Authors** : Tscheikuna J, Chvaychoo B, Naruman C, Maranetra N.  
**Title** : Tranexamic acid in patients with hemoptysis.  
**Source** : Journal of the Medical Association of Thailand. 85(4):399-404, 2002(Apr).  
**Keywords** : Tranexamic Acid, Hemoptysis.  
**Abstract** : Hemoptysis is a common respiratory symptom leading to admission to hospital. The main management of hemoptysis depends on treating the underlying cause. The use of tranexamic acid is recommended by many doctors without much information available. MATERIAL AND METHOD: This study was a randomized double blinded placebo controlled trial in using tranexamic acid (Transamine) in hemoptysis patients. The study period was one week. Patients with hemoptysis were separated into 3 groups depending on the amount of blood. Group 1 consisted of patients with blood streak sputum. Group 2 coughed up less than 20 ml of frank blood. Patients in Group 3 were those who coughed up 20-500 ml of blood per day. A record of the amount of bleeding and drug side effects was done. RESULTS: From June 1994 to May 1997, 46 patients with hemoptysis completed the study. There were 21 in the tranexamic acid group and 25 in the placebo group. The placebo group had a tendency not to have underlying lung disease and more patients who had a normal chest X-ray. The benefit of tranexamic acid in shortening the days of hemoptysis is not shown in this study. There was a low incidence of side effects of tranexamic acid in this study. CONCLUSION: This randomized double blinded placebo controlled trial could not demonstrate the benefit of tranexamic acid in shortening the days of hemoptysis and confirm the low incidence of side effects of this drug.

**No. 458**

- Authors** : Toomtong P, Young JD.  
**Title** : Nitric oxide production by human peripheral blood mononuclear cells.  
**Source** : Annals Academy of Medicine Singapore. 30(3):270-273, 2001.  
**Keywords** : Endotoxin, Fluorescence, Human Mononuclear Cells, L-Arginine, Nitric Oxide Production, Snap.  
**Abstract** : Introduction : There are conflicting data on the ability of human mononuclear cells to produce nitric oxide (NO). We investigated nitric oxide production from peripheral blood mononuclear cells (PBMs) by using a new sensitive fluorescent indicator. Materials and Methods: PBMs from healthy volunteers were collected, plated in 96-well microplates, and loaded with the fluorescent nitric oxide probe, 4,5-diaminofluorescein diacetate (DAF-2DA). Experiments were performed in normal control and endotoxin-stimulated PBMs, with and

without exogenous L-arginine. The exogenous nitric oxide donor S-nitroso-N-acetyl-penicillamine (SNAP) was used as a positive control. Fluorescence intensity was measured with a fluorescence microplate reader. Results: Nitric oxide production by human PBMs can be demonstrated by the use of the fluorescent indicator, DAF-2DA, in both control and endotoxin-stimulated conditions. Nitric oxide production was independent of the concentration of exogenous L-arginine. The addition of endotoxin did not change nitric oxide production. PBMs treated with SNAP showed a concentration dependent increase in fluorescence. Nitric oxide production over 5 hours was constant and identical in both control and stimulated groups. Conclusion: This fluorescent indicator technique is useful for the study of NO production by human PBMs. Nitric oxide production by PBMs was independent of exogenous L-arginine concentration and was not affected by endotoxin.

**No. 459**

- Authors** : Tscheikuna J.  
**Title** : Laser bronchoscopy: experience at Siriraj Hospital.  
**Source** : Journal of the Medical Association of Thailand. 84(12):1661-6, 2001(Dec).  
**Keywords** : Laser bronchoscopy.  
**Abstract** : Laser bronchoscopy is a major procedure employed in intervention bronchoscopy. From August 1998 to August 2000, 20 patients with endobronchial lesions were treated by this procedure in the Respiratory and Tuberculosis Division of the Department of Internal Medicine, Siriraj Hospital. Of 16 malignant lesion, a good response was obtained in 78 per cent (7 out of 9) of lesions in the proximal right main bronchus with failure to open any of the 3 completely obstructed lesions at the left distal bronchus. The results of treatment of malignant lesions in the trachea and carina were acceptable. Good results were obtained from all 4 benign endobronchial obstructions. No complications arose in this study. This small series demonstrates the benefit of laser bronchoscopy in patients with high risk endobronchial obstructive lesions.

**No. 460**

- Authors** : Tuchinda C, Likitmaskul S, Unachak K, Panamonta O, Patarakijavanich N, Chetthakul T.  
**Title** : The epidemiology of type 1 diabetes in Thai children.  
**Source** : Journal of the Medical Association of Thailand. 85(6):648-52, 2002(Jun).  
**Keywords** : Type 1 Diabetes, Children.  
**Abstract** : The incidence of type 1 diabetes in children aged 0-15 years in Thailand was reported to be as low as 0.2/100,000/year in 1984-1985. This survey from 1991 to 1995 by the same investigators using the same questionnaires distributed to hospitals in every province demonstrated increasing numbers. In Bangkok, the capital city, a survey was done by using the capture-recapture method, and found a significant incidence of 1.65/100,000/yr. This number is equal to the incidence in other countries in Asia. This result might be effectively considered as an exact incidence rate during this decade.

**No. 461 (782)**

- Authors** : Turbpaiboon C, Svasti S, Sawangareetakul P, Winichagoon P, Srisomsap C, Siritanaratkul N, Fucharoen S, Wilairat P, Svasti J.  
**Title** : Hb Siam [ $\alpha 15(A13)Gly \rightarrow Arg$  ( $\alpha 1$ ) (GGT  $\rightarrow$  CGT)] is a typical alpha chain hemoglobinopathy without an alpha-thalassemic effect.  
**Source** : Hemoglobin. 26(1):77-81, 2002(Feb).  
**Keywords** : Typical Alpha Chain Hemoglobinopathy, Alpha-Thalassemic.

**No. 462**

- Authors** : Ueyama H, Li YH, Fu GL, Lertrit P, Atchaneeyasakul LO, Oda S, Tanabe S, Nishida Y, Yamade S, Ohkubo I.  
**Title** : An A-71C substitution in a green gene at the second position in the red/green visual-pigment gene array is associated with deutan color-vision deficiency.  
**Source** : Proceedings of the National Academy of Sciences of the United States of America. 100(6): 3357-3362, 2003.  
**Keywords** : Molecular-Genetics, Japanese Men, Tandem Array, Opsin Genes, Human Red, Photopigment, Defects, Expression, Mutations, Phenotype.  
**Abstract** : We studied 247 Japanese males with congenital deutan color-vision deficiency and found that 37 subjects (15.0%) had a normal genotype of a single red gene followed by a green gene(s). Two of them had missense mutations in the green gene(s), but the other 35 subjects had no mutations in either the exons or their flanking introns. However, 32 of the 35 subjects, including all 8 subjects with pigment-color defect, a special category of deuteranomaly, had a nucleotide substitution, A-71C, in the promoter of a green gene at the second position in the red/green visual-pigment gene array. Although the -71C substitution was also present in color-normal Japanese males at a frequency of 24.3%, it was never at the second position but always found further downstream. The substitution was found in 19.4% of Chinese males and 7.7% of Thai males but rarely in Caucasians or African Americans. These results suggest that the A-71C substitution in the green gene at the second position is closely associated with deutan color-vision deficiency. In Japanese and presumably other Asian populations further downstream genes with -71C comprise a reservoir of the visual-pigment genes that cause deutan color-vision deficiency by unequal crossing over between the intergenic regions.

**No. 463**

- Authors** : Vacharaksa K, Prakanrattana U, Suksompong S, Chumpathong S.  
**Title** : Tranexamic acid as a means of reducing the need for blood and blood component therapy in children undergoing open heart surgery for congenital cyanotic heart disease.  
**Source** : Journal of the Medical Association of Thailand. 85:S904-9(Suppl.3), 2002(Sep).  
**Keywords** : Heart Surgery, Cardiopulmonary Bypass, Cyanotic Congenital Heart Defects.  
**Abstract** : Children undergoing cardiac operations using cardiopulmonary bypass (CPB) are at risk of significant postoperative bleeding and the need for transfusion. The antifibrinolytic drug, tranexamic acid, decreases blood loss in adult patients undergoing cardiac surgery. However, its efficacy has not been extensively studied in patients with cyanotic congenital heart defects (CHD). Using a prospective, randomized, double-blind study design, we examined 67 children undergoing repair of cyanotic CHD. After induction of anesthesia and prior to skin incision, patients received 15 mg/kg of tranexamic acid intravenously. At the end of CPB, a second bolus of tranexamic acid (15 mg/kg) or saline placebo was administered. Postoperative blood loss and transfusion requirements from

the period after protamine administration until 24 hours after admission to the intensive care unit were recorded. In addition, the hematocrit, platelet count and other indices of coagulation were recorded every 6 hours. There was no significant difference in postoperative blood loss between the treated and the placebo group (12.51 +/- 13.20 ml/kg per 24 hours, in the tranexamic acid group, vs 10.68 + 6.38 ml/kg per 24 hours, in the placebo group). Also there was no significant difference in the amounts of blood and blood products administered between the two groups. No adverse effects of tranexamic acid were found in this study. In conclusion, there was no significant difference in postoperative blood loss or blood and blood product requirement between those children with cyanotic CHD undergoing open heart surgery who received a single dose of tranexamic acid compared with those who received two doses.

**No. 464**

- Authors** : Vanprapar N, Chearsakul S, Chokephaibulkit K, Phongsamart W, Lolekha R.  
**Title** : High CD4+ T-cells percentage and/or low viral load are predictors of 1-5 years survival in HIV-1 vertically infected Thai children.  
**Source** : Journal of the Medical Association of Thailand. 85:S690-3(Suppl 2), 2002(Aug).  
**Keywords** : CD4, T-cells, HIV-1, Children.  
**Abstract** : OBJECTIVE: Enrolling pediatric HIV children into the clinical trial of when to initiate antiretroviral therapy is a crucial ethical issue. CD4+ T-cells percentage and/or viral load were able to identify potential cases of survival through 5 years of age. METHOD: HIV infected cohort from 1992 to 1994 from Children's and Siriraj Hospitals were followed from 1 through 5 years of age. The outcome was survival or death. The predictors were CD4 percentage and viral load (without age and clinical status adjustment). RESULT: 16 of 35 (45.71%) of the cohort survived through 5 years of age. The probability of survival increased to almost 100 per cent either with CD4+ T-cells percentage of over 22 or viral load of less than 500,000.

**No. 465**

- Authors** : Vanichseni S, Choopanya K, Des Jarlais D, Sakuntanaga P, Kityaporn D, Sujarita S, Raktham S, Hiranrus K, Wasi C, Mock P, Mastro T.  
**Title** : HIV among injecting drug users in Bangkok: the first decade.  
**Source** : International Journal of Drug Policy. 13(1):39-45, 2002.  
**Keywords** : HIV, Injecting drug users, Bangkok, Seroprevalence, Risk behavior, Substance abuse.  
**Abstract** : Objective: To examine the long-term structure of the high human immunodeficiency virus (HIV) prevalence epidemic among injecting drug users (IDUs) in Bangkok, Thailand. Methods: Annual HIV seroprevalence surveys were conducted at the drug abuse treatment clinics of the Bangkok Metropolitan Administration (BMA) from 1987 onward. Risk behavior surveys were conducted in 1989, 1993 and 1997. A large cohort study to measure HIV incidence was also conducted in the BMA drug treatment clinics from 1995 to 1998. Results: HIV prevalence rose rapidly in 1988 and then remained stable at 30-40%. A very high percentage (over 90%) of IDUs reported reducing risk behavior by the fall of 1989, with injection risk behavior declining from 1989 through 1997. Sexual risk behavior occurred mostly within primary relationships. Estimated HIV incidence was moderate to high at 5.8/100 person-years at risk from 1995 to 1998. Incarceration and injecting while incarcerated were strongly associated with incident HIV infections. Conclusions: The initial risk reduction served to reduce HIV transmission and stabilize the epidemic, preventing saturation of HIV within IDUs in Bangkok. Significant levels of risk behavior persisted,

however, leading to a 'moderate to high' incidence rate. Successfully addressing a high seroprevalence HIV epidemic among IDUs will probably require multiple, large-scale prevention efforts maintained over long time periods.

**No. 466**

**Authors** : Vareesangthip K, Chawanasunthornpos R, Hanlakorn P, Suwannaton L, Larpkitchachorn R, Ong-Aj-Yooth L.  
**Title** : Sodium lithium countertransport in red cells from dialyzed uremic patients.  
**Source** : Journal of the American Society of Nephrology. 13:723a (Suppl.S), 2002.  
**Keywords** : Sodium Lithium, Red Cells, Dialyzed Uremic.

**No. 467**

**Authors** : Vareesangthip K, Jitpraphai P, Vongwiwatana A, Permpikul P, Pornpong C, Larpkitchachorn R, Ong-Aj-Yooth L.  
**Title** : Results of renal transplantation of the Siriraj Hospital-Thailand.  
**Source** : Transplantation Proceedings. 35(1):159-162, 2003.  
**Keywords** : Renal Transplantation.

**No. 468**

**Authors** : Vareesangthip K, Shayakul C, Nitiyanant W, Panthongdee W, Ong-Aj-Yooth L.  
**Title** : Erythrocyte sodium lithium countertransport and membrane fluidity in diabetic nephropathy in Thailand.  
**Source** : Journal of the American Society of Nephrology. 13:689a (Suppl.S), 2002.  
**Keywords** : Sodium Lithium, Diabetic Nephropathy.

**No. 469 (49)**

**Authors** : Vareesangthip K, Thongtang V, Hanlakorn P, Pidetcha P, Suwannaton L, Ong-Aj-Yooth L.  
**Title** : Erythrocyte sodium lithium countertransport in heart transplantation.  
**Source** : Transplantation Proceedings. 33(7-8):3561-3563, 2001(Nov-Dec).  
**Keywords** : Na/Li Countertransport, Thiol-Groups, Kinetics, Disease, Proteins.

**No. 470 (50, 790)**

**Authors** : Vattanaviboon P, Siritanaratkul N, Ketpirune J, Wilairat P, Yuthavong Y.  
**Title** : Membrane heme as a host factor in reducing effectiveness of Dihydroartemisinin.  
**Source** : Biochemical Pharmacology. 64(1):91-98, 2002.  
**Keywords** : Artemisinin, Heme, Thalassemia, Malaria.  
**Abstract** : Plasmodium falciparum infecting alpha-thalassemic erythrocytes are resistant to artemisinin and its derivatives. Binding of the drug to hemoglobin H resulting in drug inactivation was previously demonstrated. We now show that an additional host factor, membrane heme, significantly accounted for decreased antimalarial activity of artemisinin. The antimalarial activity of dihydroartemisinin in the presence of normal and thalassemic erythrocyte membranes showed a correlation with the heme content of the membrane ( $r(2) = 0.466$ ,  $P < 0.01$ ). The correlation was more clearly seen when the drug effectiveness was correlated with the heme content of  $\alpha$ -thalassemic membrane ( $r(2) = 0.636$ ,  $P < 0.01$ ). However, the drug effectiveness showed no correlation to ferrozine-reactive (free or non-heme) iron content ( $r(2) =$

0.0001,  $P > 0.05$ ). alpha-Thalassemic erythrocytes contained higher amounts of membrane heme (11.04 +/- 8.96 nmol/mg membrane protein) than those from normal and beta-thalassemia/HbE erythrocytes (2.68 +/- 1.28 and 3.98 +/- 3.98 nmol/mg membrane protein, respectively,  $P < 0.01$ ). Loss of drug effectiveness was also correlated with increment of heme content in membrane prepared from normal erythrocytes treated with phenylhydrazine. It is concluded that heme in both normal and thalassemic erythrocyte membranes is an important factor in drug inactivation. (C) 2002 Elsevier Science Inc. All rights reserved.

**No. 471**

**Authors** : Veerakul G, Sanpakit K, Tanphaichitr VS, Mahasandana C, Jirattanasopa N.  
**Title** : Secondary hemophagocytic lymphohistiocytosis in children: an analysis of etiology and outcome.

**Source** : Journal of the Medical Association of Thailand. 85:S530-41 (Suppl 2), 2002.

**Keywords** : Hemophagocytic lymphohistiocytosis, Etiology, Children

**Abstract** : Fifty-two pediatric patients were diagnosed with secondary hemophagocytic lymphohistiocytosis (HLH) at the Department of Pediatrics, Siriraj Hospital between 1989 and 1998. Of these, 15 were infection-associated (IAHS), 25 were malignancy-associated (MAHS) and 12 were idiopathic HLH. Causative organisms for IAHS were Salmonella (3), Staphylococcus (2), enterobacter (2), dengue virus (3), malaria (2) and one each of Epstein Barr virus (EBV), Serratia marcescens and Penicillium maneffei. Unlike those reported in adults and in the Western literature, 47 of 52 children in the present series were immunocompetent hosts. In addition, the proportion of MAHS was higher than expected (48.1%). Twenty-two of 25 MAHS presented with hemophagocytic syndrome and were subsequently found to have malignant diseases. Sixty per cent of MAHS (15 cases) were associated with non-Hodgkin's lymphoma (NHL), mainly T-cell. Other malignancies included acute leukemias (7) MDS (1), Langerhans cell histiocytosis (1) and histiocytic sarcoma (1). Treatment approaches were specific therapy for individuals with known causes. Supportive treatment with blood components transfusions, steroid, intravenous immunoglobulins (IVIG), and chemotherapeutic agents, mainly vinblastine and etoposides, were used in indicated cases. Of the 52 cases, 15 (28.8%) had a fatal outcome during the acute phase, and other 4 died of their subsequent malignant diseases. There was a statistically significant association between poorer prognosis and patients' age  $< 3$  years ( $p = 0.004$ ) or MAHS ( $p = 0.005$ ). Conclusion: Secondary HLH is not uncommon in Thai children who are immunocompetent. Malignancies, particularly NHL, are highly suspicious especially for cases not responsive to conventional therapy. Poor prognostic factors are age less than 3 years and MAHS.

**No. 472**

**Authors** : Vejbaeaya S, Chierakul N, Luangtrakool K, Stephens HAF, Chandanayingyong D, Bejrachandra S.

**Title** : Analysis of HLA-DRB1, -DQA1 and -DQB1 alleles in Thai patients with pulmonary tuberculosis.

**Source** : Tissue Antigens. 59:88 (Suppl. 2), 2002.

**Keywords** : HLA-DRB1, DQA1, DQB1, Pulmonary Tuberculosis.

**No. 473**

- Authors** : Vejbaesya S, Chierakul N, Luangtrakool K, Srinak D, Stephens HAF  
**Title** : Associations of HLA class II alleles with pulmonary tuberculosis in Thais.  
**Source** : European Journal of Immunogenetics. 29(5):431-434, 2002.  
**Keywords** : Susceptibility, India.  
**Abstract** : Tuberculosis is an important infectious disease in Thailand. Susceptibility to tuberculosis is influenced not only by the environment but also by host genetic factors. In this study, we investigated HLA alleles in 82 patients with tuberculosis from Bangkok and in 160 normal controls. HLA-DRB1, DQA1 and DQB1 genotyping was performed by the PCR-SSO method. The frequency of HLA-DQB1\*0502 was increased in tuberculosis patients compared to the normal controls (P = 0.01, OR = 2.06). In contrast, the frequencies of DQA1\*0601 and DQB1\*0301 were decreased in tuberculosis patients compared to the controls (P = 0.02 and P = 0.01, respectively). Our results suggest that HLA-DQB1\*0502 may be involved in the development of pulmonary tuberculosis, whereas HLA-DQA1\*0601 and DQB1\*0301 may be associated with protection against tuberculosis.

**No. 474**

- Authors** : Vejbaesya S, Tanwandee T, Pandey JP.  
**Title** : Association of immunoglobulin gm genotypes with hepatitis C virus clearance.  
**Source** : Tissue Antigens. 59:139-139 (Suppl. 2), 2002.  
**Keywords** : Hepatitis C Virus.

**No. 475**

- Authors** : Vichayanrat A, Ploybutr S, Tunlakit M, Watanakejorn P.  
**Title** : Efficacy and safety of voglibose in comparison with acarbose in type 2 diabetic patients.  
**Source** : Diabetes Research & Clinical Practice. 55(2):99-103, 2002(Feb).  
**Keywords** : Type 2 Diabetic.  
**Abstract** : We performed a randomized crossover open comparative study to evaluate the efficacy and safety of voglibose and acarbose in 30 patients with type 2 diabetes who were not well controlled with diet therapy. There was no significant reduction of FBG with either voglibose or acarbose at 4 and 8 weeks after treatment. The 1 h postprandial blood glucose (PPBG) level was significantly decreased from 224.9±42.8 to 204.1±37.6 (P=0.005) and 206.1±38.9 mg/dl (P=0.038) after voglibose therapy at 4 and 8 weeks, respectively. Significant decrease was also obtained after acarbose treatment from 228.3±37.4 to 182.7±35.5 (P<0.001) and 186.6±36.1 mg/dl (P<0.001). The decrease of 1 h PPBG was associated with a significant fall of serum insulin concentration. HbA(1c) levels were also significantly decreased from 7.07±1.21 to 6.83±1.11 (P=0.017) and 6.79±1.33% (P=0.036) after voglibose and 6.98±0.98 to 6.70±1.04 (P<0.001) and 6.59±1.04% (P<0.001) after acarbose at 4 and 8 weeks. In contrast to voglibose, treatment with acarbose significantly decreased the 2 h PPBG at 4 and 8 weeks and the 2 h postprandial serum insulin concentration at 8 weeks. Adverse drug events were more commonly reported in acarbose-treated patients (P<0.05). Increased flatulence was observed in 56.7 and 90% of the patients taking voglibose and acarbose, respectively, while abdominal distention was noted in 10 and 16.7%. Significantly decreased body weights of 0.9 and 0.8 kg were recorded at 8 weeks after voglibose and acarbose therapy, respectively. We conclude that both voglibose (0.2 mg) and acarbose (100 mg) thrice daily significantly decreased HbA(1c), PPBG and postprandial insulin

levels. At these dose levels, voglibose was associated with less gastrointestinal side effects and slightly less efficacy for postprandial glucose reduction.

**No. 476**

- Authors** : Vichayanrat A, Study Investigators of DESIRES-Z.  
**Title** : Dose-expanded study in the reinforcement of efficacy of simvastatin.  
**Source** : Journal of the Medical Association of Thailand. 85(4):438-45, 2002(Apr).  
**Keywords** : Dose, Simvastatin.  
**Abstract** : Two hundred and twenty two hyperlipidemic patients were recruited for a 12-week prospective, multicenter, open-label, titrate-to-goal study to evaluate the efficacy and safety of 20 to 40 mg per day of simvastatin in a Thai population. The efficacy on lipid lowering was evaluated at 4 weeks and 8 weeks after medication. Based on NCEP ATP II guideline and ADA position statement, subjects were categorized into three groups according to LDL-C goals; group I: patients without CHD and with < 2 CHD risk factors, group II: patients without CHD and with > or = 2 CHD risk factors and group III: CHD patients or diabetic patients with > or = 1 risk factors. Significant changes of all lipid parameters from baselines were noted at 4 weeks after medication except for HDL-C levels. Reduction of serum LDL-C, TC and TG by 40 per cent, 29 per cent and 16 per cent respectively and increase of serum HDL-C by 5 per cent were observed at 8 weeks of therapy (p<0.05). At 4 weeks after taking simvastatin 20 mg/day, 78.9 per cent of patients in group I, 67.4 per cent in group II and 40.9 per cent in group III achieved LDL-C goals. Seventeen per cent of the patients who were evaluated at 8 weeks increased the simvastatin dosage to 40 mg per day in the second month of treatment. At 8 weeks of therapy with simvastatin 20-40 mg/day, 90.1 per cent of patients in group I, 77.4 per cent in group II and 66.7 per cent in group III achieved LDL-C goals. Adverse symptoms during therapy, mostly mild, developed in 6.3 per cent of the 222 patients. Conclusion: Simvastatin 20-40 mg/day was effective and well tolerated in managing lipid parameters in Thai patients similar to other ethnic populations.

**No. 477**

- Authors** : Vichyanond P, Phongsamart G, Nettagul R.  
**Title** : Validity, predictability and repeatability of the two clinical asthma scoring systems in asthmatic children admitted to the Siriraj Hospital.  
**Source** : Journal of Allergy and Clinical Immunology. 109(1):739 Suppl. S, 2002.  
**Keywords** : Asthma, Children.

**No. 478**

- Authors** : Vichyanond P, Sunthornchart S, Singhirannusorn V, Ruangrat S, Kaewsomboon S, Visitsunthorn N.  
**Title** : Prevalence of asthma, allergic rhinitis and eczema among university students in Bangkok.  
**Source** : Respiratory Medicine. 96(1):34-38, 2002.  
**Keywords** : Asthma, Allergic Rhinitis, Eczema, Adult, Thailand, Bangkok, Prevalence.  
**Abstract** : Prevalence of childhood asthma is increasing worldwide including in developing countries such as Thailand. Despite a wide availability of epidemiological data on childhood asthma in Thailand, prevalence of asthma in adults has not been well studied within this community. Objectives of this study were to study prevalence of asthma, allergic rhinitis and eczema in a random group of university students in Bangkok using the standardized written and video questionnaires from the ISAAC phase I protocol. The ISAAC phase I, written and video (international version, AVQ 3.0)

questionnaires were administered to 3631 randomly selected university students from six universities in Bangkok. The age range of subjects were between 16-31 years (mean +/- SD = 19.1 +/- 1.7 years). There were 1197 males and 2434 females (ratio = 1:2.03). Data were entered into and analysed by the Epi Info 4 program. Prevalence of wheeze within the past 12 months and of diagnosed asthma for this group of subjects was 10.1% and 8.8%. Prevalence of allergic rhinitis (nasal with eye symptoms within the past 12 months) was 26.3% and of eczema (rash at typical sites of atopic dermatitis, within the past 12 months) was 9.4%. Presence of rhinoconjunctivitis, gender and age were significant risk factors for asthma with male, younger subjects and those with rhinoconjunctivitis reported more frequent asthma-related symptoms ( $P < 0.01$ ). As in previous studies which found an increase in asthma among Thai children, this survey indicates that the prevalence of asthma among Thai university students has increased to the same level as in several European countries. A large number of adults residing in Bangkok are suffering from rhinitis-related symptoms, the majority of which probably represents allergic rhinitis.

**No. 479**

- Authors** : Vichyanond P, Visitsuntorn N, Ruengruk S, Malainual N.  
**Title** : Vacuum cleaning does not sufficiently reduce mite allergens from beddings.  
**Source** : Journal of the Medical Association of Thailand. 85:S586-92 (Suppl 2), 2002 (Aug).  
**Keywords** : Mite Allergens.  
**Abstract** : INTRODUCTION: Conflicting results exist with regard to the efficacy of vacuum cleaners on the removal of mite allergens from bedding. OBJECTIVES: The authors prospectively compared a short term efficacy of two types of regular vacuum cleaners (National-N and Hoover-H) with a specialized cleaner (Vorwerk-V) in the removal of mite allergens from mattresses. MATERIAL AND METHOD: Thirty-five dormitory beds with high mite allergen concentrations at the baseline period (month 0) were selected. They were matched into three groups according to group I mite allergen concentrations (N 11 beds, H 12 beds, V 12 beds). Vacuuming was performed on months 1 and 4 by the assigned vacuum cleaner in each group. Immediately after, mattresses were vacuumed by a reference cleaner (another National vacuum cleaner) at both months. Vacuuming was performed over the entire bed for 2 minutes/square meter. Group I mite allergens (sums of Der p 1 and Der f 1) were measured; concentrations and total mite allergens removed by the tested cleaners as well as by the reference cleaner, at various time points, were compared. RESULTS: Ability to remove mite allergens by vacuum cleaners depends on weight of dust removed and also on mite concentrations in the dust samples. Despite the fact that H and V appeared to remove higher mite allergens than N, such differences were not statistically significant ( $p > 0.05$ ), both at month 1, and 4. Surprisingly, mattress mite concentrations removed by both high capacity cleaner groups (V & H) increased at month 4, whereas, it remained unchanged in the third group (N). This increase led to a concomitant increase in total allergen removed by V and H. Nevertheless, remaining total allergens in the mattresses in V and H, as judged from the amount of allergens obtained by the reference cleaner, increased at month 1 and 4 compared to baseline values ( $p < 0.05$ ), whereas, no change was observed in N. CONCLUSION: Although high capacity vacuum cleaners removed a large amount of mite allergens from mattresses, they did not sufficiently reduce mattress mite allergen burden as determined by the reference cleaner during this short term study.

**No. 480**

- Authors** : Vichyanond P.  
**Title** : Pediatric allergy and immunology at Siriraj Hospital.  
**Source** : Journal of the Medical Association of Thailand. 85:S569-78(Suppl 2), 2002 (Aug).  
**Keywords** : Children, Allergic Diseases.  
**Abstract** : Like other parts of the world, prevalence of childhood allergic diseases in Thailand, particularly of asthma and allergic rhinitis, has risen sharply over the past decade. Epidemiologic studies in this country indicated that allergic sensitization (mainly to house dust mites, cockroaches and cat dander) is the major important risk factor for the development of asthma. House dust mites are the most important source of allergens causing sensitization among allergic Thai children. A nationwide survey indicated that house dust mites are ubiquitous in Thai homes. Despite the authors' earlier finding that mite allergen levels in Thailand (mean group-I allergen level of 11 mcg/g dust), exceeded the recommended international threshold level to induce asthmatic symptoms (10 mcg/g dust), mite allergen levels in homes within the Bangkok area are in the modest range (5 mcg/g dust). With mattresses in Thailand being commonly laid on hardwood surfaces, the authors demonstrated that only top-covering of these mattresses with locally produced mite-impermeable membrane, mite allergens could be substantially reduced. Other active research in pediatric allergy in Thailand include complete surveys of outdoor aeroallergens and research in pharmacologic managements of allergic diseases. The Thailand Registry of Primary Immune Deficiency has recently been established to collect data on patients with these disorders and to improve means for diagnosis and treatment for these unfortunate patients. Finally, with a recent approval for board certification in pediatric allergy and immunology, it is expected that the number of specialists in this field will increase to a sufficient level to provide adequate care for allergic/immunologic children in Thailand.

**No. 481**

- Authors** : Vichyanond P. Anuraklekha P. Ruengruk S.  
**Title** : Exercise-induced asthma among Thai asthmatic children.  
**Source** : Journal of the Medical Association of Thailand. 85:S579-85(Suppl 2), 2002 (Aug).  
**Keywords** : Asthma, Children.  
**Abstract** : **BACKGROUND:** Approximately seventy per cent of asthmatic children from temperate climates, with normal lung function, have exercise-induced asthma (EIA). There is certain evidence to suggest that EIA may be less frequently encountered among children who live in tropical climates. Prevalence of EIA in Asian asthmatic children has never been thoroughly studied. **OBJECTIVE:** To study the prevalence of EIA among Thai asthmatic children. **METHOD:** A prospective study was performed to determine the prevalence of EIA in 44 Thai asthmatic children who were able to perform the spirometric maneuver. Subjects were randomly selected asthmatic children from the Pediatric Allergy Clinic, Department of Pediatrics, Siriraj Hospital. They were subjected to exercise testing on a steady state, motor-driven treadmill for 6 minutes (mean speed +/- SD = 3.7 +/- 0.4 km/h, mean level of inclination + SD = 15.0 +/- 5.2 degrees). The testing was conducted in a temperature-controlled (mean temperature +/- SD = 24.4 +/- 0.8 degrees C) and humidity-controlled environment (mean relative humidity +/- SD = 41.7 +/- 2.1%). Lung function tests were performed before exercise, immediately after and at 3, 5, 10, 15, 20 and 30 minutes after exercise. Results of the lung function test were calculated as per cent falls of forced expiratory volume in 1 sec (FEV1), peak expiratory flow rate (PEFR), and forced expiratory flow at 25 per cent-75 per cent (FEF50) from baselines. EIAs were diagnosed when drops of FEV1, PEFR and FEF50 were greater

than 20 per cent, 25 per cent and 25 per cent from baseline values, respectively. RESULTS: Of the 44 patients studied (31 boys and 13 girls; mean age 11.9 years), 34 per cent had mild asthma. Fifty-nine per cent had moderate asthma and 7 per cent had severe asthma. Eleven patients (25%) had EIA diagnosed by significant falls of FEV1's (26 +/- 12.6%), whereas, 13 patients (30%) and 20 patients (45%) had EIA defined by significant drops of PEFr's and FEF50's, respectively. A total of 23 patients (52%) had EIA by one or more diagnostic criteria. Peak times for EIA as diagnosed by FEV1, PEFr and FEF50 occurred at 3, 10, and 10 minutes respectively, after exercise. Most EIA episodes observed were of mild degree. CONCLUSIONS: The prevalence of EIA in Thai children is much lower than figures reported in studies from Western countries. By using a significant fall of FEV1's as the diagnostic criteria, only 25 per cent were diagnosed as having EIA. By PEFr and FEF50 criteria, percentages of EIA increased to 30 per cent and 45 per cent respectively. Screening for EIA, therefore, may not be an appropriate diagnostic tool for the diagnosis of childhood asthma in tropical climates.

**No. 482**

- Authors** : Viprakasit V, Kankirawatana S, Akarasereenont P, Durongpisitkul K, Chotewuttakorn S, Tanphaichitr VS.
- Title** : Baseline levels of plasma endothelin-1 (ET-1) and changes during transfusion in thalassemic patients.
- Source** : American Journal of Hematology. 70(3):260-262, 2002.
- Keywords** : Plasma Endothelin-1, Beta-Thalassemia, Hb E Disease, Transfusion.
- Abstract** : We studied levels of plasma endothelin-1 (ET-1) in 25 beta-thalassemia/Hb E patients before and after blood transfusion. Baseline ET-1 levels in these patients were significantly higher than in normal controls (110.17 +/- 2.1 pg/mL vs. 8.9 +/- 2.0 pg/mL, P < 0.05). After blood transfusion, levels of plasma ET-1 tend to slightly increase during the first 24 hr but significantly decline at the 7(th) day to levels (8.01 +/- 1.7 pg/mL) which do not differ from those of controls. This study highlights a different alteration of plasma ET-1 in patients with beta-thalassemia compared to that of patients with sickle-cell anemia. Am. J. Hematol. 70:260-262, 2002.

**No. 483**

- Authors** : Viprakasit V, Kidd AMJ, Ayyub H, Horsley S, Hughes J, Higgs DR.
- Title** : De novo deletion within the telomeric region flanking the human alpha globin locus as a cause of alpha thalassaemia.
- Source** : British Journal of Haematology. 120(5):867-875, 2003.
- Keywords** : Alpha Thalassaemia, Hs-40, Hs-33 Alpha Major Regulatory Element, Alu-Associated Homologous Recombination.
- Abstract** : We have identified and characterized a Scottish individual with alpha thalassaemia, resulting from a de novo 48 kilobase (kb) deletion from the telomeric flanking region of the alpha globin cluster which occurred as a result of recombination between two misaligned repetitive elements that normally lie similar to 83 kb and 131 kb from the 16p telomere. The deletion removes two previously described putative regulatory elements (HS-40 and HS-33) but leaves two other elements (HS-10 and HS-8) intact. Analysis of this deletion, together with eight other published deletions of the telomeric region, showed that they all severely downregulated alpha globin expression. Together they defined a 20.4-kb region of the human alpha cluster, which contains all of the positive cis-acting elements required to regulate alpha globin expression. Comparative analysis of this region with the corresponding segment of the

mouse alpha globin cluster demonstrated conserved non-coding sequences corresponding to the putative regulatory elements HS-40 and HS-33. Although the role of HS-40 as an enhancer of alpha globin expression is fully established, these observations suggest that the role of HS-33 and other sequences in this region should be more fully investigated in the context of the natural human and mouse alpha globin loci.

**No. 484**

- Authors** : Viprakasit V, Pung-Amritt P, Suwanthon L, Clark K, Tanphaichitr VS.  
**Title** : Complex interactions of delta beta hybrid haemoglobin (Hb Lepore-Hollandia) Hb E (beta(26) (G -> A)) and alpha(+) thalassaemia in a Thai family.  
**Source** : European Journal of Haematology. 68(2):107-111, 2002.  
**Keywords** : Haemoglobin E, Haemoglobin Lepore-Hollandia, Alpha(+) Thalassaemia.  
**Abstract** : Haemoglobin Lepore-Hollandia is an extremely rare condition in which a small deletion gives rise to a deltabeta hybrid, P-like globin. There are two single reports of patients from South Pacific Islands and Bangladesh. We describe a family from central Thailand, in which this Hb Lepore-Hollandia interacts with a common P globin variant beta(E) resulting from the codon 26, G-->A mutation) and alpha(+) thalassaemia (-alpha(3.7)). This intriguing interaction caused a troublesome diagnosis, as the two proband brothers were diagnosed as having Hb E/beta thalassaemia. Molecular analysis of genomic DNA performed in this study allowed the definitive diagnosis of this complicated interaction. Such studies are required in the diagnosis of thalassaemia and haemoglobinopathies for particular regions like South-east Asia, where many different genotypes may give rise to haemoglobin disorders.

**No. 485**

- Authors** : Viprakasit V, Tanphaichitr VS, Pung-Amritt P, Petrarat S, Suwantol L, Fisher C, Higgs DR.  
**Title** : Clinical phenotypes and molecular characterization of Hb H-Pakse disease  
**Source** : Haematologica. 87(2):117-125, 2002.  
**Keywords** : Alpha Thalassaemia, Hemoglobin H-Pakse Disease, Hemoglobin H-Cs Disease, Termination Codon Mutations.  
**Abstract** : Background and Objectives. Hemoglobin Constant Spring (Hb CS), caused by a termination codon mutation (TAA --> CAA) in the alpha2 gene, is the most common non-deletional type of alpha thalassaemia in Southeast Asia. This mutation can most easily be detected by loss of an MseI-restriction site (T/TAA) spanning the termination codon. Recently, we sequenced the alpha globin genes from patients with alpha thalassaemia in whom this MseI site was absent. This revealed, a previously described termination codon mutation (TAA --> TAT) associated with Hb Pakse. This prompted us to re-evaluate the molecular basis of alpha thalassaemia in other Thai patients with non-deletional types of Hb H disease. Design and Methods. DNA samples from 30 patients, previously diagnosed as having Hb H-CS disease, were characterized by direct genomic sequencing and by using a mismatched polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP). Clinical and hematologic data were assessed, Results. Hemoglobin electrophoresis in almost all 30 unrelated patients with non-deletional alpha thalassaemia revealed a slow migrating band resembling Hb CS, Five of these patients were found to have Hb H-Pakse disease and the remainder had Hb H-CS disease. Comparing the hematology in patients with these two genotypes, no significant differences were found except that the proportion of Hb H was higher in patients with Hb H-Pakse disease. Interpretation and Conclusions. These

results suggest that termination codon mutations may have been previously misidentified in many cases of non-deletional Hb H disease. Findings from six unrelated families described in this study suggest that the proportion of patients with the Hb Pakse mutation might be underestimated and that this mutation could be prevalent in Southeast Asia. Analysis of mismatched-PCR-RFLP, described here, was shown to provide an unequivocal diagnosis and will be applicable in population screening programs.

**No. 486 (51)**

- Authors** : Viprakasit V, Tanphaichitr VS.  
**Title** : Compound heterozygosity for alpha(0)-thalassemia (--(THAI)) and Hb Constant Spring causes severe Hb H disease.  
**Source** : Hemoglobin. 26(2):155-162, 2002.  
**Keywords** : Alpha-Thalassemia, Deletions, Diagnosis, Cells, Thai.  
**Abstract** : We report two unrelated cases of Hb H-Constant Spring (Hb H-CS) disease caused by a compound heterozygosity for alpha(0)-thalassemia (- -(THAI) deletion) and Hb CS (alpha142, TAA-->CAA) in Thai patients. Hematological and clinical observations in the probands are more severe than those of deletional type of Hb H disease (-/-alpha), owing to an early onset of anemia and recurrent episode of anemic crises. These cases also address the importance of the - -(THAI) deletion which causes a severe clinical phenotype, and that could be missed by routine screening. We suggest that testing for this mutation should be included in the screening program for the prevention and control of thalassemia in Thailand, and possibly in other countries in Southeast Asia, where alpha(0)-thalassemias are highly prevalent.

**No. 487**

- Authors** : Viprakasit V, Wiriyasateinkul A, Sattayasevana B, Miles KL, Laosombat V  
**Title** : Hb G-Makassar [beta 6(A3)Glu -> Ala; codon 6 (GAG -> GCG)]: Molecular characterization, clinical, and hematological effects.  
**Source** : Hemoglobin. 26(3):245-253, 2002.  
**Keywords** : Performance Liquid-Chromatography, Sickle-Cell Trait, Alpha-Thalassemia, Beta-Thalassemia, Hemoglobin A(2).  
**Abstract** : We report a Thai family in which five members are Hb G-Makassar heterozygotes and one member is, in addition, a heterozygote for beta(0)-thalassemia (IVS-I-1, G --> T). We confirm that the previously presumed mutation at codon 6 of the beta-globin gene is GAG --> GCG. Hb G-Makassar heterozygotes are asymptomatic and hematologically normal. The Hb G-Makassar/beta(0)-thalassemia compound heterozygote has features of thalassemia minor. A simple and rapid polymerase chain reaction-restriction fragment length polymorphism for the detection of Hb G-Makassar is described.

**No. 488**

- Authors** : Visalyaputra S, Pethpaisit N, Ariyanon P, Parakkamodom S, Permpolprasert L, Apidechakul P, Latthikaviboon U, Limsakul A, Santivarangkana T, Sirilertmakasakul P.  
**Title** : EMLA cream and intraperitoneal lidocaine decrease intraoperative pain during postpartum tubal sterilization.  
**Source** : Journal of the Medical Association of Thailand. 85:S942-7(Suppl.3), 2002(Sep).  
**Keywords** : EMLA Cream, Intraperitoneal Lidocaine, Postpartum Tubal Sterilization.  
**Abstract** : We conducted a randomized, double blinded, placebo controlled trial to evaluate the effectiveness of EMLA cream together with intraperitoneal lidocaine for pain relief in postpartum tubal ligation. In a factorial designed study, 90 postpartum

patients were randomly assigned to have 5 g of EMLA or placebo cream applied to the skin in 2 groups of 45 patients and to have intraperitoneal instillation of 20 ml of either 1 per cent, 2 per cent lidocaine or normal saline in 3 groups of 30 patients. A numerical rating pain score (0-10) was used during skin check, skin infiltration and uterine tube manipulation. The pain scores were significantly lower in the EMLA group as compared with the placebo group during the skin forceps check ( $p < 0.001$ ) and during local skin infiltration ( $p < 0.05$ ). The pain scores were also significantly lower during intraabdominal manipulation in the group using either 1 per cent or 2 per cent intraperitoneal lidocaine as compared with the group using normal saline ( $p < 0.001$ ), but no difference was found between the groups using 1 per cent and 2 per cent lidocaine. IMPLICATIONS: Five g of EMLA cream applied to the skin together with 20 ml of 1 per cent lidocaine instilled into the abdominal cavity effectively decrease intraoperative pain in patients undergoing postpartum tubal sterilization under local anesthesia.

**No. 489**

- Authors** : Visalyaputra S, Sanansilp V, Pechpaisit N, Choavarartana R, Sritisarn S, Ungpinitpong W, Permpolprasert L, Apidechakul P.
- Title** : Postoperative analgesic effects of intravenous lornoxicam and morphine with pre-emptive ropivacaine skin infiltration and preperitoneal instillation after transabdominal hysterectomy.
- Source** : Journal of the Medical Association of Thailand. 85:S1010-6(Suppl.3), 2002(Sep).
- Keywords** : Intravenous Lornoxicam, Morphine, Transabdominal Hysterectomy.
- Abstract** : To investigate the effectiveness of intravenous lornoxicam and morphine with the preemptive effects of ropivacaine local skin infiltration and peritoneal instillation in reducing postoperative pain after transabdominal hysterectomy, a randomized, double blinded, placebo-controlled study was done in 88 patients undergoing transabdominal hysterectomy under general anesthesia. The patients were allocated into 4 groups to receive: (group A) only intravenous morphine 10 mg; (group B) intravenous morphine 10 mg and lornoxicam 16 mg; (group C) intravenous morphine 10 mg, lornoxicam 16 mg with 0.5 per cent ropivacaine local skin infiltration before skin incision and 1 per cent ropivacaine instillation before peritoneal incision; (group D) intravenous morphine 10 mg, lornoxicam 16 mg with 1 per cent ropivacaine instillation after peritoneal closure and 0.5 per cent ropivacaine local skin infiltration before skin closure. Pain was assessed by patients using visual analog scales (VAS) at 2, 6, 12, 18, 24, 48 hours after surgery. Time to first analgesic requirement and morphine requirement during the first 6 h were significantly lower in the groups using lornoxicam (group B, C, D) as compared with the group using only morphine (group A). However there was no significant difference between group B and group C or group D which means that the additional analgesic effects of using local anesthetic infiltration and instillation either before (pre-emptive) or after the incision could not be seen in this study. Implication: Intravenous 16 mg of lornoxicam with 10 mg of morphine significantly reduced postoperative pain during the first 6 h after abdominal hysterectomy. Additional effects of using local anesthetic wound infiltration to the use of lornoxicam could not be demonstrated.

**No. 490**

- Authors** : Visitsunthorn N, MOUNGNOI P, Saengsiriwut A, Wacharasindhu S.  
**Title** : Linear growth of prepubertal asthmatic Thai children receiving long-term inhaled corticosteroids.  
**Source** : Journal of the Medical Association of Thailand. 85:S599-606(Suppl 2), 2002 (Aug).  
**Keywords** : Prepubertal Asthmatic, Children, Inhaled Corticosteroids.  
**Abstract** : **BACKGROUND** : Long-term inhaled corticosteroids are recommended in persistent asthma in children. The aim of this study was to determine the growth rate of asthmatic Thai children who received long-term inhaled corticosteroids. **METHOD**: This controlled clinical trial was carried out on 145 prepubertal asthmatic Thai children, 81 in the study group (the group who received long-term inhaled corticosteroids) and 64 in the control group. **RESULTS**: The mean age of the patients when the study began was 5.9 years in the study group and 4.7 years in the control group. The average dose of inhaled corticosteroids used was 300 microg/day. The average duration overtime of inhaled corticosteroid usage was 2 years (9 months-5 years). The study showed that inhaled corticosteroids (300 microg/day for 9-60 months) have no significant effects on growth rate. From linear regression analysis, the factors that influenced the growth rate of asthmatic patients were the severity of the asthma and the age of the patients when nasal corticosteroids were started. Insulin-like Growth Factor 1 (IGF 1) and Insulin-like Growth Factor Binding Protein 3 (IGFBP 3), were measured in 7 patients in the study group and 5 in the control group. All were normal, the height standard deviation score (Ht.SDS) was below average. **CONCLUSIONS** : The average dose of inhaled corticosteroids (300 microg/day for 9 months) has no significant effects on the growth rate of prepubertal asthmatic Thai children.

**No. 491**

- Authors** : Visitsunthorn N, Tiranathanakul A, Netrakul R, Vichyanond P.  
**Title** : Evaluation of consistency between local and imported seafood allergen extracts.  
**Source** : Journal of the Medical Association of Thailand. 85:S593-8(Suppl 2), 2002 (Aug).  
**Keywords** : Seafood Allergen.  
**Abstract** : **BACKGROUND**: Seafood is a common cause of food allergy in Thai adults and children. Skin prick test is a safe and convenient way to screen seafood allergy. To date, the Allergy Unit, Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol University uses imported extracts for seafood skin prick test. The extracts are expensive and may not be the same species as seafood in Thailand. **OBJECTIVES**: To compare the consistency between local seafood allergen extracts prepared by the Department of Pharmacology, Faculty of Medicine Siriraj Hospital, Mahidol University and imported seafood allergen extracts. **METHODS**: The study was a prospective comparative trial performed in children who attended the Pediatric Allergy Clinic, Siriraj Hospital from March 1999 to October 2000. The skin prick test was performed with the local seafood allergen extracts prepared by a pharmacist from the Department of Pharmacology and the imported seafood allergen extracts included shrimp, fish and crab. Histamine and normal saline were used as positive and negative control respectively. The positive result was recorded when wheal reaction was  $\geq 3$  mm larger than negative control. **RESULTS**: Eighty eight patients (57 boys and 31 girls) were included in this study. The average age was 7.7 years (1-15 years). Half of the patients had a history of seafood allergy. The study showed probable consistency between imported and local skin prick test of shrimp and crab extracts ( $\kappa = 5-7$ ) but no consistency between imported and local skin prick test of fish extracts ( $\kappa < 5$ ). The study also showed no

consistency between history of seafood and skin prick test result. CONCLUSION: Local seafood allergen extracts from the Department of Pharmacology, Faculty of Medicine Siriraj Hospital, Mahidol University are safe but they cannot replace the imported seafood allergen extracts. Further investigations about sensitivity and specificity of both kinds of allergen extracts are necessary.

**No. 492**

- Authors** : Visitsunthorn N, Udomittipong K, Punnakan L.  
**Title** : Theophylline toxicity in Thai children.  
**Source** : Asian Pacific Journal of Allergy and Immunology. 19(3):177-182, 2001.  
**Keywords** : Asthma, Pharmacokinetics, Overdose, Dosage, Apnea.  
**Abstract** : Theophylline is a useful drug in the treatment of respiratory diseases with bronchospasm but it has very narrow safety margin. The study was carried out in 44 admitted Thai children with plasma theophylline levels > 20 mug/ml to determine the association between blood levels and symptoms of theophylline toxicity. The prevalence of theophylline toxicity (plasma theophylline level > 20 mug/ml), in Thai children is about 11%. Thirty-four percent of the patients who had theophylline levels less than 30 mug/ml and 78% of those who had levels more than 30 mug/ml had symptoms of theophylline toxicity. The symptoms were related to the gastrointestinal tract (34%), cardiovascular system (18.2%), neurological system (6.8%):and metabolism (54.5%). The possible causes of theophylline toxicity were respiratory tract infection theophylline overdosage, interaction with other drugs, impairment of liver;unction, congenital heart disease and theophylline usage in neonates. Theophylline is still a useful drug but should be used with caution. Theophylline levels should be checked in every child who receives theophylline.

**No. 493**

- Authors** : Vorrakitpokatorn P, Limsakul A.  
**Title** : Drug-induced hyperthermia and rhabdomyolysis during the perioperative period: report of three patients.  
**Source** : Journal of the Medical Association of Thailand. 85:S884-92(Suppl.3), 2002(Sep).  
**Keywords** : Hyperthermia, Rhabdomyolysis, Perioperative Period.  
**Abstract** : Drug-induced hyperthermia is one condition that anesthesiologists may meet even though it is uncommon, it is life threatening. We report 3 cases of patients at Siriraj Hospital, Mahidol University who developed drug-induced hyperthermia and rhabdomyolysis from different mechanisms. In two of them, the diagnosis was suspected malignant hyperthermia. Rigidity, hyperthermia and tachyarrhythmia developed just after inhalation induction (halothane and sevoflurane) and intubation with succinylcholine. The other case was the result of amphetamine abuse. He also had received both succinylcholine and inhalation agent (isoflurane) but no obvious signs or symptoms were detected during anesthesia. He developed a gradual increase in fever over 13 hours post operation and complained of muscle pain (with leg muscle cramps). All of them showed a marked increase in muscle enzymes and had rhabdomyolysis. As a result of early detection and early management, these three patients survived without any permanent damage to vital organs. We conclude that Thai anesthesiologists should be more aware and alert to drug-induced hyperthermia especially as nowadays many teenagers abuse stimulant drugs and "triggering" drugs as antidepressant or serotonin reuptake inhibitors are prescribed more frequently. Early detection and management will decrease morbidity and mortality.

**No. 494**

- Authors** : Wadhvani J, Hussain R, Raman PG.  
**Title** : Nature of lesion in cerebrovascular stroke patients: clinical stroke score and computed tomography scan brain correlation.  
**Source** : J Assoc Physicians India. 50:777-81, 2002.  
**Keywords** : Cerebrovascular stroke, Clinical stroke ,Tomography scan brain.  
**Abstract** : AIM: To differentiate between cerebral infarct and intracerebral haemorrhage on the basis of clinical stroke score (Siriraj Stroke Score and Guy's Hospital Score) and to find out the sensitivity and overall accuracy of these scoring systems by comparing it with CT scan findings. MATERIAL AND METHODS: Two hundred patients with acute stroke were analysed by Siriraj and Guy's Hospital Score simultaneously CT scan was performed and patients with subarachnoid haemorrhage, tuberculoma, tumours and trauma were excluded. RESULT: CT scan revealed cerebral infarction in 152 (76%) patients and cerebral haemorrhage in 48 (24%) patients. The sensitivity of Siriraj Stroke Score was 92.54% for infarction and 87% for haemorrhage (equivocal and infratentorial cases were excluded) and it's overall accuracy was 91.11%. The Guy's Hospital Score had a sensitivity of 93.42% for infarction, 66.66% for haemorrhage and overall accuracy was 87%. CONCLUSION: Siriraj Stroke Score is easier to use at bed side and has a greater accuracy (especially in diagnosis of haemorrhage) than the Guy's Hospital Score.

**No. 495**

- Authors** : Wanachiwanawin D, Chokephaibulkit K, Lertlaituan P, Ongrotchanakun J, Chinabut P, Thakerngpol K.  
**Title** : Intestinal microsporidiosis in HIV-infected children with diarrhea.  
**Source** : Southeast Asian J Trop Med Public Health. 33(2):241-5, 2002.  
**Keywords** : HIV, Children, Diarrhea.  
**Abstract** : Intestinal microsporidiosis is a common opportunistic disease associated with diarrhea in adult AIDS patients in Thailand; the data regarding this infection in children are scarce. The present study was designed to investigate the prevalence and clinical features of intestinal microsporidiosis in hospitalized HIV-infected and uninfected (free of HIV) children with diarrhea. Of the 95 HIV-infected children and 87 uninfected children, 24 (25.3%) and 13 (14.9%) respectively were diagnosed with intestinal microsporidiosis. Species identification of microsporidia spores, by transmission electron microscopy, demonstrated Enterocytozoon bienewsi in 5 cases. Cryptosporidium parvum was a common coinfective parasite; pneumonia was the most frequent concurrent disease found in children with intestinal microsporidiosis. Malnutrition was commoner in the HIV-infected group (79.2% vs 23.1%;  $p = 0.003$ ). This study indicates that intestinal microsporidiosis is an important disease in both HIV-infected and uninfected Thai children with diarrhea.

**No. 496**

- Authors** : Wanachiwanawin D, Sutthent R, Chokephaibulkit K, Mahakittikun V, Ongrotchanakun J, Monkong N.  
**Title** : Toxoplasma gondii antibodies in HIV and non-HIV infected Thai pregnant Women.  
**Source** : Asian Pacific Journal of Allergy and Immunology. 19(4):291-293, 2001.  
**Keywords** : Toxoplasma gondii antibodies, HIV.  
**Abstract** : Serological evidence for Toxoplasma gondii Infection in Thai pregnant women was investigated. One thousand six hundred and sixty-nine blood specimens were collected from 838 HIV-seropositive and 831 HIV-

seronegative pregnant women attending the antenatal-care clinic at Siriraj Hospital, Bangkok, Thailand, during a two-year period. Toxoplasma IgG antibody was detected, using a solid-phase enzyme-linked immunosorbent assay in which the membrane protein p-30 was the predominant antigen. IgG positive sera were subsequently examined for IgM antibody by the capture antibody enzyme immunoassay. The IgG antibody was found in 450 (53.7%) HIV seropositive women and 44 (5.3%) non-HIV infected women, with a statistically significant difference ( $p < 0.0001$ ). Three of the 450 HIV-seropositive and 2 of the 44 HIV-seronegative sera with IgG antibody were positive for IgM antibody against *T. gondii*. This result suggested that HIV seropositive pregnant women had a higher risk of Toxoplasma infection with increase exposure to their offspring.

**No. 497**

- Authors** : Wannasilp N, Pongvarin N, Pokum S, Leowattana W, Mahanonda N.  
**Title** : Serum magnesium in Thai coronary artery disease patients.  
**Source** : Journal of the Medical Association of Thailand. 84:S645-9(Suppl.3), 2001(Dec).  
**Keywords** : Serum magnesium, Coronary artery disease.  
**Abstract** : Hypomagnesemia or magnesium (Mg) deficiency has been hypothesized to play a role in coronary artery disease (CAD). The authors aimed to evaluate serum Mg concentration in 100 CAD patients compared with 100 healthy controls. Mean values of serum Mg level in CAD and the control group were 2.14 +/- 0.39, 2.24 +/- 0.3 mg/dL respectively ( $P=0.052$ ). The prevalence of Mg deficiency was 12 per cent in the CAD patients, and 5 per cent in the control group (odds ratio=2.59, 95% confident interval = 0.88-7.65,  $P=0.063$ ). There was no significant difference in the serum Mg level between the 2 groups, although it tended to be lower in CAD patients. The prevalence of Mg deficiency did not differ significantly between the study group, however, it tended to be higher in CAD patients. These findings demonstrated that CAD patients may be associated with Mg deficiency, and contribute to the pathogenesis of CAD or acute thrombosis. Following this evidence, Mg treatment may be necessary in CAD patients with Mg deficiency or acute myocardial infarction (AMI).

**No. 498**

- Authors** : Wasant P, Srisomsap C, Liammongkolkul S, Svasti J.  
**Title** : Urea cycle disorders in Thai infants: a report of 5 cases.  
**Source** : Journal of the Medical Association of Thailand. 85:S720-31(Suppl 2), 2002(Aug).  
**Keywords** : Infants, Urea Cycle Disorders.  
**Abstract** : Urea Cycle Disorders (UCD) is an inborn error of urea synthesis in which ammonium and other nitrogenous precursors of urea accumulate leading to episodic coma and a high mortality rate. Therapy with peritoneal dialysis, essential amino acids or their nitrogen-free analogues has increased survival. The authors report 5 cases of urea cycle disorders, all of whom developed and were rescued from hyperammonemic coma. However, the eventual outcome was quite variable. Argininosuccinate lyase deficiency (ALD) Case 1. A 2 month old male infant, a product of a consanguineous marriage (Suphanburi province); developed poor feeding on day 7, lethargy, convulsion, hepatomegaly and respiratory alkalosis leading to respiratory failure and coma. Hyperammonemia, elevation of glutamic acid and argininosuccinic acid and its anhydrides confirmed the diagnosis of ALD. He is now 9 years old and severely retarded. Case 2. A male infant with history of lethargy, poor feeding on day 3, treated as sepsis and required respiratory support for 6 days; subsequently readmitted at age 2 weeks with vomiting, lethargy, seizure

activity and hyperammonemia, and was treated by a local pediatrician in Songkhla province. There was a history of parental consanguinity and he was referred to Siriraj Hospital on day 64 with severe essential amino acid deficiency and acrodermatitis enteropathica with markedly elevated plasma citrulline level. In spite of aggressive treatment; the patient developed sepsis and he expired on day 78. Ornithine transcarbamylase deficiency (OTC) Case 3. An eleven-month-old male infant, the product of a non-consanguineous marriage, developed neonatal onset of hyperammonemia on day 5 after poor feeding, lethargy, hypothermia, seizure, apnea and coma. He was rescued from neonatal hyperammonemic coma on day 9 after aggressive treatment, but expired at eleven months of age after overwhelming sepsis. Case 4. A male infant, sibling of case 3 was referred to Siriraj Hospital on day 8 with hyperammonemia and coma. In spite of intensive genetic counseling given after the birth of their first child with OTC, the couple chose to have another baby without informing any physician. The baby developed vomiting and lethargy on day 2; subsequently hyperammonemia was noted. In spite of aggressive treatment given; hepatic dysfunction, renal failure and disseminated intravascular coagulation defects occurred on day 15. He expired on day 18 after parental permission for discontinuation of all treatment. Argininosuccinate synthetase deficiency (ASS) or Citrullinemia. Case 5. A seven week old female infant, the product of a consanguineous marriage and of Pakistani ethnic origin; developed intermittent vomiting from day 6. Initial diagnoses included ruminations, sepsis and pyloric stenosis for which she was operated on (day 30); however, vomiting continued; subsequently seizures, hyperammonemic coma developed and she was rescued from hyperammonemic coma within 30 hours. Significant elevations of citrulline and L-glutamine were demonstrated. She was discharged in excellent condition to her home in Dubai, the United Arab Emirates.

**No. 499 (796)**

- Authors** : Wasant P, Svasti J, Srisomsap C, Liammongkolkul S.  
**Title** : Inherited metabolic disorders in Thailand.  
**Source** : Journal of the Medical Association of Thailand. 85:S700-9(Suppl 2), 2002(Aug).  
**Keywords** : Inherited metabolic disorders, inborn errors of metabolism.  
**Abstract** : The study of inborn errors of metabolism (IEM) in Thailand is in its infancy. The majority are clinically diagnosed since there are only a handful of clinicians and scientists with expertise in inherited metabolic disorders, shortage of well-equipped laboratory facilities and lack of governmental financial support. Genetic metabolic disorders are usually not considered a priority due to prevalence of infectious diseases and congenital infections. From a retrospective study at the Medical Genetics Unit, Department of Pediatrics, Siriraj Hospital; estimated pediatrics patients with suspected IEM were approximately 2-3 per cent of the total pediatric admissions of over 5,000 annually. After more than 10 years of research and accumulated clinical experiences, a genetic metabolic center is being established in collaboration with expert laboratories both in Bangkok (Chulabhorn Research Institute) and abroad (Japan and the United States). Numerous inherited metabolic disorders were identified--carbohydrate, amino acids, organic acids, mitochondrial fatty acid oxidation, peroxisomal, mucopolysaccharidoses etc. This report includes the establishment of genetic metabolic center in Thailand, research and pilot studies in newborn screening in Thailand and a multicenter study from 5 institutions (Children's National Center, King Chulalongkorn Memorial Hospital, Pramongkutkloa Hospital, Ramathibodi and Siriraj Hospitals). Inherited metabolic disorders reported are fructose-1,6-bisphosphatase deficiency, phenylketonuria, homocystinuria, nonketotic hyper-

glycinemia, urea cycle defect (arginino succinate lyase deficiency, arginino-succinate synthetase deficiency), Menkes disease, propionic academia and mucopolysaccharidoses (Hurler, Hurler-Scheie).

**No. 500**

- Authors** : Watanapa P, Watanapa WB.  
**Title** : Liver fluke-associated cholangiocarcinoma.  
**Source** : British Journal of Surgery. 89(8):962-970, 2002.  
**Keywords** : Opisthorchis-Viverrini Infestation, Carcinogenic Parasite Infection, Syrian Golden-Hamsters, Nitric-Oxide, Intrahepatic Cholangiocarcinoma, Clonorchis-Sinensis, Thailand, Cancer, Induction, Dimethylnitrosamine.  
**Abstract** : Background : Infection with liver flukes has been reported to be associated with bile duct malignancy. Methods: The review is based on a literature search (Medline) and, in some cases, direct contact with authors or principal investigators. Results: A large body of evidence indicates that Opisthorchis viverrini is a definite cause of human cholangiocarcinoma, whereas Clonorchis sinensis is a probable cause. The evidence regarding Opisthorchis felineus is insufficient to assess its role in carcinogenesis. Possible mechanisms of carcinogenesis include chronic irritation, nitric oxide formation, intrinsic nitrosation and activation of drug-metabolizing enzymes. Early detection of bile duct malignancy is difficult and not clinically available at present, although cholangiocarcinoma-associated soluble antigen has been reported in an experimental study to be a useful early marker of cancer development. Long-term survival after surgical treatment of liver fluke-associated cancer is similar to that reported in patients without liver fluke infestation. Conclusion: Liver fluke-associated cholangiocarcinoma is still a health problem in developing countries. Mechanisms of carcinogenesis should be explored further in order to reduce the impact of this disease.

**No. 501**

- Authors** : Waywa D, Kongkriengdaj S, Chaidatch S, Tiengrim S, Kowadisaiburana B, Chaikachonpat S, Suwanagool S, Chairasert A, Curry A, Bailey W, Suputtamongkol Y, Beeching NJ.  
**Title** : Protozoan enteric infection in AIDS related diarrhea in Thailand.  
**Source** : Southeast Asian Journal of Tropical Medicine and Public Health. 32:151-5(Suppl.2), 2001.  
**Keywords** : AIDS, Enteric protozoa, Diarrhea.  
**Abstract** : The aim of this study was to determine the prevalence of enteric protozoa and other pathogens in AIDS patients with diarrhea in Bangkok, Thailand. Of 288 consecutive patients screened in the 10 month period between November 1999-August 2000 inclusive, 55 (19.2%) had Cryptosporidium spp, 13 (4.5%) had Isospora oocyst, 11 (3.8%) had Giardia lamblia, 3 (0.9%) had Entamoeba histolytica, and 1 (0.3%) had Iodamoeba butschlii infection. The prevalence of microsporidia was 11% in this study. Of 251 patients for whom stool culture for bacteria was performed, enteric bacterial pathogens isolated were Campylobacter spp in 18 (7.1%), Salmonella spp in 11 (4.3%), and Shigella spp in 1 (0.5%). Other pathogens found in these patients were Clostridium difficile in 16/102 (15.6%). Mycobacterium spp in 18/287 (6.2%), and Strongyloides stercoralis in 23/288 (8.0%). Overall, parasitic and bacterial pathogens were identified in 140 (48.6%) patients. These pathogens were identified by the routine simple wet smear technique in 32, formalin-ether concentration method in 46, culture for S. stercoralis in 5, and culture for bacteria in 30. Additional test, using modified Ziehl-Neelsen staining, identified

cryptosporidial oocyst, isospora oocyst, and Mycobacterium spp in 72. The microsporidia, initially identified by modified trichrome blue staining, all were then determined to be Enterocytozoon bienewsi by thin sectioning electron microscopy. Protozoan and bacterial pathogens were confirmed to be important etiologic agents in diarrhea in AIDS in Thailand. They were all associated with increased mortality. Routine stool examination by simple wet smear detected only one-fourth of these pathogens. Therefore all diagnostic techniques for these organisms should be made more widely available in Thailand.

**No. 502**

- Authors** : Wisuthsarewong W, Viravan S.  
**Title** : Management of severe atopic dermatitis with thymostimulin.  
**Source** : Journal of the Medical Association of Thailand. 85:S749-54(Suppl 2), 2002(Aug).  
**Keywords** : Severe Atopic Dermatitis, Thymostimulin.  
**Abstract** : Two patients with severe atopic dermatitis unresponsive to conventional Therapy were enrolled in a clinical trial on thymostimulin (TP-1). TP-1 was administered by subcutaneous injection 1 mg/kg/day for 14 days and then 1 mg/kg/day on alternate days for 2 months. Clinical and immunological status were evaluated at baseline and at regular intervals during the treatment. Clinical severity scores included eight skin conditions (erythema, edema, vesicle, crust, excoriation, scaling, lichenification, pigmentation), two subjective components (itchiness and loss of sleep), and extent of area affected. There was a statistically significant improvement in the overall assessment of the severity scores. There were no definite changes in immunological parameters including CD4, CD8 T-cell subpopulations and serum IgE, but eosinophil count showed a mark decrease in one case. No serious side effects were observed.

**No. 503**

- Authors** : Witoonchart C, Bartlet L.  
**Title** : The use of a meditation programme for institutionalized juvenile delinquents.  
**Source** : Journal of the Medical Association of Thailand. 85:S790-3(Suppl 2), 2002(Aug).  
**Keywords** : Institutionalized Juvenile Delinquents.  
**Abstract** : The study applied intensive-seven consecutive days meditation programme in 101 late adolescent male delinquents in Upekkha Detention Centre. All of the boys completed the programme and answered the questionnaires. All of them felt that the meditation practice had been beneficial. 70 per cent of the subjects described feelings of contentment and calm, 53 per cent requested the programme to be repeated, 52 per cent of the subjects declared a clearer understanding in the doctrine of Karma, 44 per cent referred to improved concentration and awareness, 36 per cent felt less impulsive, 22 per cent had flashbacks of their criminal behavior and their victims. In conclusion, the boys in Upekkha Detention Centre had the willing to join and complete the intensive meditation programme. Their self assessment reports showed a positive attitude to the programme. It is possible to develop a meditation programme as an adjunctive therapy for institutionalized juvenile delinquents.

**No. 504**

- Authors** : Wongkajornsilp A, Ouyprasertkul M, Sangruchi T, Huabprasert S, Pan Y, Tisavipat N, Chanyavanich V, Sangruchi S, Chomsamut K, Anthony DD.
- Title** : The analysis of peri-tumor necrosis following the subcutaneous implantation of autologous tumor cells transfected with an episome transcribing an antisense insulin-like growth factor 1 RNA in a glioblastoma multiforme subject.
- Source** : Journal of the Medical Association of Thailand. 84:S740-7(Suppl.3), 2001(Dec).
- Keywords** : Peri-tumor necrosis, Insulin-like growth factor 1, Glioblastoma multiforme.
- Abstract** : A subject inflicted with glioblastoma multiforme who received partial tumor resection and radiotherapy was recruited for an ex vivo gene therapy protocol using irradiated autologous tumor cells that had been engineered to suppress the expression of insulin-like growth factor I as the tumor vaccine. After subcutaneous injection for 8 weeks, the subject developed peri-tumor necrosis with mass effect. The authors wondered whether this event could have resulted from the tumor vaccine. The tissue section bordering the necrotic tumor tissue to the viable normal tissue was examined for nature of any infiltrated cells and their activities. Lymphocytes, macrophages, and a small number of neutrophils diffused into the necrotic tumor tissue were found. The infiltrated lymphocytes consisted of both CD4+ and CD8+ T cells. The functional activity of these lymphocytes was demonstrated by the active production of interferon  $\gamma$  and tumor necrosis factor alpha based on the respective immunofluorescent staining localized to these cells. This finding is compatible with the proposed mechanism underlying the tumor vaccination. However, the contribution of radiation treatment to this event cannot be clearly ruled out.

**No. 505**

- Authors** : Wongtrakul S, Bishop AT, Friedrich PF.
- Title** : Vascular endothelial growth factor promotion of neoangiogenesis in conventional nerve grafts.
- Source** : Journal of Hand Surgery-American. 27A(2):277-285, 2002.
- Keywords** : Vascular Endothelial Growth Factor (VEGF), Nerve Graft, Neoangiogenesis, Scarred Bed, Nerve Blood Flow.
- Abstract** : The effect of vascular endothelial growth factor (VEGF) on angiogenesis and neovascularization of conventional nerve grafts was evaluated in 48 rabbits. A 2.5-cm segment of right sciatic nerve was removed and orthotopically repaired. This graft was wrapped in dialysis tubing to prevent vessel ingrowth from adjacent tissue. An osmotic pump delivered either VEGF (100 ng/h for 3 days) or control solution. Evaluation methods included angiography, vessel density, and nerve blood flow measurement at 3, 7, and 14 days. On day 3, 42% of the control nerves and 100% of VEGF-treated nerves had partial longitudinal neovascularization. Vessel density (0.84 +/- 0.22 vessel/mm<sup>2</sup>) and nerve blood flow [25.34 +/- 7.62 mL/(min . 100 g)] in VEGF-treated nerves were significantly higher than control group values [0.23 +/- 0.13 vessel/mm<sup>2</sup> and 5.35 +/- 0.99 mL/(min . 100 g)]. Progressive improvement in parameters was seen at 7 and 14 days. Vascular endothelial growth factor infusion accelerates longitudinal neoangiogenesis and shortens the nerve ischemic time to 3 days in this model. The revascularization of VEGF-treated conventional nerve grafts in a poorly vascularized bed is identical to that of grafts in a healthy bed. Copyright (C) 2002 by the American Society for Surgery of the Hand.

**No. 506**

- Authors** : Wutthiphan S, Vajaradul Y, Lerdvitayasakul R, Nimvorapun T, Koochingchai W.  
**Title** : Ocular fixation with quadriceps tendon allograft.  
**Source** : Cell and Tissue Banking. 3(2):121-126, 2002.  
**Keywords** : Quadriceps tendon allograft.  
**Abstract** :

**No. 507**

- Authors** : Yenchitsomanus P, Akkarapatumwong V, Pung-Amritt P, Intorasoot S, Thanootarakul P, Oranwiroon S, Veerakul G, Mahasandana C.  
**Title** : Genotype and phenotype of haemophilia A in Thai patients.  
**Source** : Haemophilia. 9(2):179-186, 2003.  
**Keywords** : Factor Viii, Fviii Gene, Haemophilia A, Mutation, Thai.  
**Abstract** : To study genotype and phenotype correlation of haemophilia A in Thai patients, molecular defects of the factor VIII (FVIII) gene were examined and their correlation with clinical phenotypes were evaluated. The molecular pathologies of FVIII in Thai patients were found to be heterogeneous. The most common mutation was FVIII intron 22 inversion accounting for about 30% of the severe cases while gene deletion was rare. Sixteen point mutations were identified, comprising two nonsense mutations (R-5X and R1966X), five missense mutations (T233I, D542Y, G1850V, W2229S and G2325C), five nucleotide deletions (1145delT, 1187-8delACAC, 1191-4delA, 1458delGA and 1534delA), three nucleotide insertions (1439-41insA, 1934insTA and 2245insACTA) and one splicing defect (IVS15+1G>T). Nine mutations (T233I, D542Y, 1145delT, 1458delGA, 1534delA, 1934insTA, W2229S, 2245insACTA and G2325C) were novel, firstly identified in Thai patients. The genotypes were found to correlate with clinical phenotypes in a majority of cases. However, in five patients the molecular defects did not correlate with clinical severity and FVIII:C level. Cellular and molecular mechanisms were proposed to be responsible in amelioration of clinical severity caused by deleterious mutations. Carrier detection by direct mutation analysis was also demonstrated.

**No. 508 (804)**

- Authors** : Yenchitsomanus PT, Vasuvattakul S, Kirdpon S, Wasanawatana S, SUSAENGAT W, Sreethiphayawan S, Chuawatana D, Mingkum S, Sawasdee N, Thuwajit P, Wilairat P, Malasit P, Nimmannit S.  
**Title** : Autosomal recessive distal renal tubular acidosis caused by G701D mutation of anion exchanger 1 gene.  
**Source** : American Journal of Kidney Diseases. 40(1):21-29, 2002.  
**Keywords** : Distal Renal Tubular Acidosis (Drta), Band 3, Anion Exchanger 1 (Ae1), Scl4a1, Thai.  
**Abstract** : Anion exchanger 1 (AE1 or band 3), encoded by the AE1 or SLC4A1 gene, regulates chloride-bicarbonate exchange in erythrocytes and a-intercalated cells of the distal nephron. Defects of AE1 at the basolateral membrane of a-intercalated cells may result in the failure of hydrogen ion secretion at the apical membrane, leading to distal renal tubular acidosis (dRTA). Abnormalities of the AE1 gene were previously reported to be associated with autosomal dominant dRTA. However, recent studies of Thai dRTA families have shown that mutations in this gene result in autosomal recessive (AR) dRTA, giving rise to the postulation that AE1 gene mutations causing AR dRTA might be found commonly in Thai pediatric patients with dRTA. We

performed a study of the AE1 gene using DNA linkage, polymerase chain reaction single-strand conformation polymorphism, restriction endonuclease HpaII digestion, and DNA sequence analyses in eight families involving 12 Thai children with dRTA, shown by abnormal urinary acidification using a short acid-loading test, as well as among their family members. Seven patients with dRTA from five families had the same homozygous missense G701 D mutation of the AE1 gene. Their parents or siblings heterozygous for the AE1 G701D mutation were clinically normal and did not have abnormal urinary acidification, although a heterozygous sibling in one family had abnormal urinary acidification. Results of this and previous studies show that a homozygous AE1 G701D mutation causes AR dRTA and is a common molecular defect among Thai pediatric patients with dRTA. (C) 2002 by the National Kidney Foundation, Inc.

**No. 509**

- Authors** : Yoshimoto T, Yamamoto T, Mizutani M, Uchihi R, Ohtaki H, Katsumata Y, Waiyawuth W, Songsivilai S.
- Title** : A novel fluorescent quadruplex STR typing system and the allele frequency distributions in a Thai population
- Source** : Journal of Forensic Sciences. 48(1):116-121, 2003.
- Keywords** : Forensic Science, Quadruplex, Dna Profiling, Str, Population Genetics.
- Abstract** : We have previously reported a new triplex amplification and typing system by silver staining for three short tandem repeat (STR) loci, 9q2h2 (D2S3020), D15S233, and D14S299 without "microvariant" alleles such as .1, .2, and, .3 alleles in the Japanese population. In the present study, we established a new quadruplex system with an additional locus D7S809 using primer sets labeled with fluorescent multi-color dyes. Using this system, we genotyped 183 Thai people, found only one "microvariant" allele (allele 20.2) at D7S809, and calculated allele frequencies and some statistical properties at these four STR loci. From these allele frequencies at four STR loci, we performed three statistical analyses including a homozygosity test, a likelihood ratio test, and an exact test for Hardy-Weinberg equilibrium (HWE). Deviations from HWE ( $p < 0.05$ ) were observed only in the two tests at the locus D7S809. In the present study, we compared the allele frequencies at these four loci in the Thai population to those in the Japanese population described previously. Consequently, all observed heterozygosities and power of discrimination (PD) at those loci in the Thai population were higher than 0.8 and 0.9, respectively, and all statistical values for discriminating power in the Thai population were slightly higher than those in the Japanese population. The combined paternity exclusion rate (combined PE) in the Thai population (0.978) was almost the same as that in the Japanese population (0.971). Therefore, this novel PCR amplification and typing system for four STR loci would be a convenient and informative DNA profiling system in the forensic field.

**No. 510**

- Authors** : Yossuck P, Preedisripipat K.
- Title** : Neonatal group B streptococcal infection: incidence and clinical manifestation in Siriraj Hospital.
- Source** : Journal of the Medical Association of Thailand. 85:S479-87(Suppl 2), 2002 (Aug).
- Keywords** : Group B Streptococcal, Late Onset Disease.
- Abstract** : From 1996 to 2001, nineteen episodes of bacteremia due to group B Streptococci (GBS) were diagnosed in Siriraj Hospital, Mahidol University. The incidence of early onset group B streptococcal disease (EOD) was 0.27 cases/1,000 live

births in 1996, and decreased to 0.10 cases/1,000 live births in 2001. The incidence of the late onset disease (LOD) was 0.05 cases/1,000 in 1996, and there has been none since 1998. All of the infants were inborn. Low birth weight was found in 53 per cent of the infants. Fifty-eight per cent of infants were male. Forty-seven per cent of the infants were born prematurely. None of the mothers had antenatal GBS screening. Only one mother received one dose of intrapartum antibiotic prophylaxis. No risk factor could be identified in 72 per cent of the mothers. EOD accounted for 79 per cent of all infants with GBS infections, with a mortality rate of 40 per cent. All of them died within the first 72 hours of life. Most EOD infants developed disease manifestations within 12 hours of life. Most common clinical manifestations were respiratory distress (74%), temperature instability (68%), cyanosis (63%), hypotension (42%) and lethargy (42%). Only one infant with EOD had meningitis. There were two infants in the LOD group; one of whom had cellulitis, and the other had meningitis. Neutropenia was noted in 42 per cent of all infants. Radiographic studies suggested a diffuse reticulogranular pattern or ground glass appearance in 38 per cent. The chest X-ray was interpreted as normal in 25 per cent of the infants. In conclusion, the incidence of GBS infection in newborn infants in Thailand is still very low but with a very high mortality. Prematurity accounts for almost half of the cases. Even though antepartum screening with intrapartum antibiotic chemoprophylaxis has been recommended in developed countries, its benefit and cost needs to be further investigated in Thailand.

**No. 511**

- Authors** : Zivna I, Green S, Vaughn DW, Kalayanarooj S, Stephens HAF, Chandanayingyong D, Nisalak A, Ennis FA, Rothman AL.
- Title** : T cell responses to an HLA-B\*07-restricted epitope on the dengue NS3 protein correlate with disease severity.
- Source** : Journal of Immunology. 168(11):5959-5965, 2002.
- Keywords** : Lymphocyte Clones, Hemorrhagic-Fever, Cross-Reactivity, Virus Serotype, Immune-Responses, Shock Syndrome, Risk-Factors, Infection, Cd4(+), Cd8.
- Abstract** : Dengue hemorrhagic fever (DHF), the severe manifestation of dengue virus (DV) infection characterized by plasma leakage, is more common in secondary DV infections in previously infected individuals and is associated with high levels of immune activation. To determine the Ag specificity of this immune response, we studied the response to an HLA-B\*07-restricted T cell epitope, residues 221-232 of the DV NS3 protein, in 10 HLA-B\*07(+) Thai children who were studied during and after acute DV infections. Peptide-specific T cells were detected in 9 of 10 subjects. The frequency of peptide-specific T cells was higher in subjects who had experienced DHF than in those who had experienced DF. We also detected peptide-specific T cells in PBMC obtained at the time of the acute DV infection in 2 of 5 subjects. These data suggest that the NS3 (221-232) epitope is an important target of CD8(+) T cells in secondary DV infection and that the activation and expansion of DV-specific T cells is greater in subjects with DHF than in those with dengue fever. These findings support the hypothesis that activation of DV-specific CD8+ T cells plays an important role in the pathogenesis of DHF.