

Abstract no. 1**Prevalence of Smoking and Depression among High School Students in Rural Thailand**

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Background : Depression and smoking are closely related. In 2004, the prevalence of depression in high school was 14.6%. In 2007, there were 10.8 million Thai smokers and 12.1 % of that was teenagers and young adults age between 15-24 year old. After reviewing the research conducted in Thailand, we could not find any information on the prevalence of association between depression and smoking. That is why we would like to conduct a research on this in hope that it would reduce the number of smokers and prevent new ones in the future.

Objectives : To find the prevalence of smoking and depression of adolescents among rural Thai population and to find the risk factor of smoking and association between smoking and depression.

Methods : A cross-sectional survey was conducted and followed by a qualitative component using focus group and in-depth interviews. Four hundred and ninety five teenagers were recruited. Of those participants eleven participants diagnosed as depressed people from using Children's Depression Inventory (CDI) (Thai version) questionnaire were selected to be part of interviews. The contents were then analyzed by quotation and thematic analysis.

Results : The prevalence of smoking and depression were 18.55 and 48.25 respectively. Smoking students significantly showed more depressive symptoms when compared to their non-smoking peers. Interestingly, levels of depression were associated with smoking status in girls but not in boys.

Conclusions : From both quantitative and qualitative methods of our study, we found that depressive symptoms could be defined as a predisposing factor for smoking which can be precipitated by other factors such as knowledge of harm of smoking, income per month, alcohol drinking and gender differentiation. Policy-maker should benefit from this invaluable data in recognizing smoking and recognizing depression before new smokers emerged.

Key Words : ● Smoking ● Depression ● Rural community ● Adolescents

Abstract no. 2**Knowledge Consciousness and Behavior in Reducing Global Warming of Nursing Student and Opinions Toward Reducing Global Warming Project in the Royal Thai Army Nursing College****Saowaluck Bunsert, Panadda Dechsiri, Kanittarat Punsard, Chutatip Khumtawee,****Jutatip Sangchompoo, Chaleamwut Juntawong, Pornrattikran Polhan,****Varaporn Ratanavongvetee, Sirikorn Munpet¹ and Wassana Naiyapatana²***¹Senior nursing students class 45; ²Nursing lecturer the Royal Thai Army Nursing College*

Introduction : Today the impacts of Global warming are major concern around the world and severely effect to mankind. The Royal Thai Army Nursing College is under a command of the army headquarter, with put more focus on the ways for Green world. That encourage behavior which is friendly to environment, by creating many projects such as Garbage separation project the smart of saving natural resources girls but these projects didn't cooperate from nursing students. Thus this research study aimed to alert nursing students about the impacts of the Global warming and pay more attention of activity related to reducing Global warming effectively. The researchers are interesting in Knowledge, Consciousness, and Behaviors in reducing global warming of nursing students all four years and survey the opinions of participation in reducing Global warming of nursing student.

Objective : To determine Knowledge Consciousness and Behaviors in reducing global warming of nursing students, to determine the relationship between Knowledge Consciousness and Behaviors in reducing global warming of nursing students, to compare Knowledge Consciousness and Behaviors in each year of nursing students, to survey the opinions of participation in reducing Global warming of nursing students.

Research Design : This research is descriptive research. The samples include first second third and fourth years of nursing student. The samples 194 samples out of 394 nursing students, were selected by using systemic random sampling. Samples size was calculated by "Taro Yamane".

Material and Method : "Knowledge Consciousness and Behaviors in reducing global warming and the opinions of participation in reducing global warming" instrument was used in this study. The instrument consists of 96 items, that confirmed by 3 experts with reliability of knowledge $r = .66$, Reliability of consciousness $r = .66$, Reliability of Behavior $r = .82$. That analyzed by descriptive statistic and used ANOVA test and Pearson's correlation coefficient test to found the relationship.

Result : The research found that over all the average score of consciousness level and Behavior level is high ($M = 3.99$, $SD. = 0.8$), ($M = 3.61$, $SD. = 0.96$) respectively and the average score of knowledge is

moderate ($M = 19.32$, $SD. = 3.04$). For testing the relationship between Knowledge Consciousness and Behavior there were significant relationship between these. Variable at the $p < 0.01$, for the comparison between Knowledge Consciousness and Behavior found that there were significantly different between Knowledge and Behavior ($p < .05$) among nursing students, classify by years. The students result also found that the higher years of nursing students have more Knowledge and Behavior in Global warming. However the study result found that there was no significant difference of nursing students classify by years regarding consciousness. For the opinion of participation in reducing Global warming, the study found that the most of the sample willing to participate in all projects of reducing Global warming the average score of the opinion of participation is high ($M = 4.13$ $SD. = 0.46$).

Conclusion : Knowledge in global warming of nursing students level is average. Nursing students should enhance the knowledge by any way. Consciousness in global warming of nursing students level is high. This research provided the guideline to be consciousness in the Global warming. Royal Thai Army Nursing College should use this prominent point to push the projects to visibly practice in the future such as creating exhibition.

Key Words : ● Knowledge ● Consciousness ● Behavior ● Global warming ● Army nursing student

Abstract no. 3

The Association between Pterygium/Pinguecula and an Aqueous Tear Deficiency Dry Eye in Population more than 18 Years of Age in Rural Thailand

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Background : Pterygium and pinguecula causal agents include ultraviolet radiation, dust, wind, geographic factor and long period of time of outdoor occupational activity. Previous studies showed unapparently association of aqueous tear deficiency dry eye with pterygium/pinguecula. A dry eye and its symptoms in pterygium/pinguecula causes degradation of patient's quality of life. However, an association of severity of pterygium/pinguecula (size and inflammation) and aqueous tear deficiency dry eye has not been reported.

Objectives : To study prevalence of pterygium/pinguecula and aqueous tear deficiency dry eye.

Methods : An analytical cross-sectional study was conducted. Questionnaires were use to collected demographic data and specific signs and symptoms of the disease. The ocular examination and evaluation of pterygium/pinguecula in size, thickness and redness then Schirmer 's test was performed.

Results : There were 187 participants participated (374 eyes). Prevalence of pterygium, pinguecula, dry eye (Schirmer's test) and dry eye (OSDI score) were 68.4%, 29.4%, 13.6% and 63.1% respectively. The study showed an association between the degree of inflammation of pterygium/pinguecula and an aqueous tear deficiency dry eye (P-value = 0.014) and severity of inflammation impacted on an OSDI score to advance (P-value = 0.029). Associated factors of dry eye (Schirmer's test) were? (PRR: 2.70,P-value: 0.041), asthma (PRR: 2.70, P-value: 0.041) and age lower than 30 years old (PRR: 4.18, P-value: 0.042). Risk factors of dry eye (OSDI) were female (PRR: 5.20, P-value: 0.015) and advanced age (PRR: 8.59, P-value: 0.023). irritation and visual disturbance (OSDI) effected on aqueous tear deficiency (PRR: 3.53, P-value: 0.023) (PRR:3.40, P-value:0.006) respectively.

Conclusions : Prevalence of Pinguecula/Pterygium and Dry eye (Schirmer's test) were 68.4% 29.4% and 13.6% respectively. Risk factors of aqueous tear deficiency dry eye were age lower than 30 years old, thyrotoxicosis and asthma. Inflammation degree of pinguecula/pterygium reduced tear volume and increased dry eye symptoms. Size had no effect on tear volume.

Key Words : ● *Pterygium* ● *Pinguecula* ● *Asthma* ● *Thyrotoxicosis* ● *Dry eyes* ● *Schirmer's test*
● *Prevalence* ● *Risk factor* ● *Ocular Surface Index score (OSDI)*

Abstract no. 4

Relationship between Selected Factors and Opinions on the Effect and Protection of Nuclear Radiation in Health Team at Phramongkutglao Hospital

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Introduction : In Thailand, there is power development plan to build nuclear power plant in 15 years (2007-2021). Nuclear power plant has risk about nuclear radiation. Health team are the first group that direct contact with people who get the effect of nuclear radiation, so research team focus on studying about opinions on the effect and protection of nuclear radiation in health team at Phramongkutglao Hospital.

Objective : First, to study about opinions on the effect and protection of nuclear radiation. Second, to study the relationship between selected factors such as age, sex, education, occupation, work place, work experience, technical training, receive information and knowledge about nuclear radiation and opinions on the effect and protection of nuclear radiation in health team at Phramongkutglao Hospital.

Research Design : Descriptive research.

Material and Method : This study selected random samples by proportion to size 150 persons. Collection data by personal information, nuclear radiation test and questionnaire about opinions on the effect and protection of nuclear radiation in health team (radiation department and trauma department) at Phramongkutglao Hospital. Results of study calculated by frequency, percentage, standard deviation and Pearson product moment correlation coefficient, chi-square, F-test and t-test.

Results: The analysis found age, education and occupation associated with opinions on the effect and protection of nuclear radiation with significant at the .05 level. Sex, workplace, experience, technical training and receive information do not associated with opinions on the effect and protection of nuclear radiation with significant at the .05 level. Knowledge about nuclear radiation associated with opinions on the effect and protection of nuclear radiation in medium level with significant at the .01 level.

Summary and Comment : The result showed the factors that associated with opinions on the effect and protection of nuclear radiation. So the health team can be used as guidelines for policy, planning and technical training to prepare prevention and confrontation from nuclear radiation.

Key Words : ● *Effect of nuclear radiation* ● *Nuclear power plant*
● *Opinions on the effect of nuclear radiation*

Abstract no. 5

The Relationship of Prevalence, Distribution and Risk Factors of Important Intestinal Parasitic Infection Using Geographic Information Systems in Thai Rural Area

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Background : Many studies have been conducted to find the prevalence and distribution of each kind of intestinal parasitic infection. Infective person was treated and then campaign was raised to control the disease. However incidence and re-infection can still be found. Our research team sees the importance of Geographical Information Systems that has been used widely to study the prevalence and relationship between distributions of infection to ecological factors for example soil type, water source, agricultural and other factors. Different ecological zones will result in different type of infection, prevalence and distribution. This new information will be important in order to make a decision whether which area will receive an intervention. Finally it will lower the cost and make the intervention most effective.

Objectives : To find out the relationship between prevalence, distribution and geographical factors of important intestinal parasitic infection in Thai rural area.

Methods : We conducted analytical cross-sectional study. The study area comprised of Ban Na Ae Sarn, Ban Phu Ngahm, and Ban Thung Hiang, Na-Yao Community, Tha Kra Dan distinct, Sa NhamChai ket, Chachoengsao Province of Eastern Thailand. Stool samples were taken from all of people living in those areas. The demographic, socioeconomic, behavioral and environmental data was obtained by questionnaire and then analyzed by statistic and spatial analysis.

Results : Among the 499 stool samples examined, the prevalence of *O.viverrini* infection was 3.9 percent. A factor associated with *O.viverrini* infection was the consuming of Lab Pla Dib (Odds ratio = 10.0) (95% CI: 1.34-74.57). The prevalence of *B.hominis* infection was 15.8 percent and *S.stercoralis* was 2.8 percent.

Conclusions : Lab Pla Dib increases risk of *Opisthorchis viverrini* infection among the people who have consumed it more than people who do not. Characteristics of prevalence, distribution, and spatial factors from GIS can help to predict the areas in need to treatment and help us to rapid planning of parasitic control programme in the future.

Key Words : ● *Opisthorchis viverrini* ● *Blastocystis hominis* ● *Strongyloides stercoralis*
● *Hookworm* ● *Intestinal parasitic infection* ● *Geographic information systems*

Abstract no. 6

The Relationship between Relative in Family, Social Support with Pregnancy's Quality of Life of Phramongkudklao Hospital

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Introduction : Quality of life shows that a person is better able to live a normal life in society to investigate the relationship between family relationship and social support. The quality of life of the pregnancy, the care provided at Phramongkudklao hospitals is interesting. The end result is beneficial to pregnancy in their own development self-reliant ready to a better quality of life based on the context of Thai society.

Objective : To study the relationship of the family, social support and quality of life to investigate the relationship between family relationship and social support. The quality of life of the pregnancy who receive antenatal care at Phramongkudklao Hospital.

Types of Research : A descriptive study of relationships. (Correlational Descriptive Research).

Materials and Methods : The sample used for pregnancy who had served as ANC Phramongkudklao Hospital of 164 people to keep collecting the questionnaire was created and the data was analyzed by analysis of correlation coefficient of Pearson (Pearson product moment correlation). The research found that family relationship is to a great extent. Levels of social support on many levels. And quality of life in the middle level. The relationship of family and social support are positively associated with quality of life of pregnant women. The care provided at hospitals VI. Moderate ($r = .600, p < .01$ and $r = .516, p < .01$, respectively).

Reviews and Summaries : Relationships, family and social support are better able to meet the needs of pregnancy. The pregnancy were self-reliant. And quality of life as a whole is moderately acceptable. Shows that a person is better able to live a normal life in society. And should have a follow-up study of pregnancy who receive ANC Phramongkudklao Hospital to continue to study the long-term quality of life and family relationships should be encouraged. And social support. To contribute to improving the lives of pregnancy further.

Key Words : ● Pregnancy ● The quality of life of pregnancy ● Family relationships ● Social support

Abstract no. 7**Prevalence and Risk Factors of Common Hand Diseases from Clinical Diagnosis in Aged above 30 Years Old Thais Population in Rural Area**

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Background : The common hand diseases which consist of carpal tunnel syndrome, trigger finger and de Quervain's tenosynovitis affect the multidimensional activities in daily life of the patients. These diseases are preventable and curable by early detection of and reducing the risk factors. In the rural area, there are some activities that cause excessively use of hands with repeating motion like a traditional weaving procedure or a hand clothes washing. These activities may be the factors that relate to the common hand diseases.

Objectives : To determine the prevalence and the risk factors of the common hand diseases in aged above 30 years old population at Baan Nayao, Thakradan subdistrict, Sanamchaiket district, Chachoengsao province.

Methods : We conducted analytical cross-sectional study. We recruited population aged above 30 years old from Nayao. Participants answered the questionnaire on demographic data, symptoms of hands and daily life activities in relation to the common hand disease. They were measured weight by scale, height by stadiometer, blood pressure by sphygmomanometer and grip strength by hand grip dynamometer. Then, the participants who had the symptoms of hands were provided the specific hand examination and answered questionnaire on severity of the hand diseases.

Results : According to this study, there were 550 participants, mean age 53.0 ± 12.4 years old, 69.3% female. The prevalence of common hand diseases was 18%. The prevalence of carpal tunnel syndrome, trigger finger and de Quervain's tenosynovitis were 12.5%, 4.7% and 2.2% respectively. The factors which related to carpal tunnel syndrome were BMI more than 30 and being agricultural worker. The factors

which related to trigger finger were trader career, weaver career and history of post traumatic hand. The factors which associated with de Quervain's tenosynovitis were history of dyslipidemia or heart disease or post traumatic hand.

Conclusions : The prevalence of common hand disease revealed higher than among the general population because of the daily life activities of the rural population. BMI more than 30 and agriculture worker were related to carpal tunnel syndrome. Trading, weaving and history of post traumatic hand were related to trigger finger. Finally, dyslipidemia, heart disease and history of post traumatic hand were related to de Quervain's tenosynovitis.

Key Words : ● *Common hand diseases* ● *Carpal tunnel syndrome* ● *de Quervain's tenosynovitis*
● *Trigger finger* ● *Rural area*

Abstract no. 8

The Relationship between Coping with Stress and Self-care Capability among Cancer Patient receiving Radiation Therapy

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Background : Cancer is a major public health problem of Thailand which found in both females and males that can occur with all organs. There are several methods to treat cancer. By the way one is treated with radiation therapy. It can be done at all stages but must be done continuously. However, not everyone needs to admit at the hospital. This treatment is only does in large hospitals. Phramongkhutkiao hospital had treated the cancer patient with radiation therapy at the radiation oncology department, division of radiation. The patients may be affected both physically and mentally and these can cause a stress. But the coping with stress of individuals are different and this is associated with self-care capability of patients to cooperate in the treatment. So to promote the potential and support patient self-care capability and quality of life in society, should be given priority to the coping with stress in patient.

Objective : To study the coping with stress, self-care capability of cancer patients receiving radiation therapy and the relationship between coping with stress and self-care capability among cancer patient receiving radiation therapy.

Research Design : Descriptive research

Material and Methods : The 54 cancer outpatients were selected by purposive sampling. Demographic data and patient disease questionnaire, coping with stress questionnaire according to Jalowiec's concept and self-care capability questionnaire according to Orem's theory were used for collecting data. The data were analyzed by using frequency, percent, mean, standard deviation and Pearson's correlation coefficient.

Results : Cancer patients receiving radiation therapy had coping with stress with high level (mean = 2.46, SD = .40), the confrontive coping with high level, as for the emotive coping and the palliative coping with moderate level. The means were classified by class 2.63, 2.37 and 2.35 respectively. They had self-care capability with high level (mean = 1.43, SD = .26), the foundational capabilities and dispositions, the power components and the capabilities for self care operations with high level. The means were classified by class 1.30, 1.36 and 1.50 respectively. And the relationship between coping with stress and

self-care capability among cancer patient receiving radiation therapy were positively correlated and significantly at level .01.

Conclusion : According to results of the research, cancer patients receiving radiation therapy had coping with stress and problems which made them can deal with their emotions and sense of relief and had ability to take care of themselves better. So nurses should be aware of importance of self-care capability and coping with stress of patient in order to improve the quality of outpatient services.

Key Words : ● *Coping with stress* ● *Self-care capability* ● *Cancer patient receiving radiation therapy*

Abstract no. 9**Prevalence and Associated Factors of Flatfoot among Population Aged above 10 Years Old in Thai Rural Area**

Nimit Sirithnakit, Chatchai Akaphat, Settha Kotanivong, Wittaya Thongtaeparak, Tanissorn Chadudomsakul, Teerapat Kittichaiwat, Pongpak Pinyoboon, Phachara Chaikaew, Phatcharaphan Sutthiwan, Pipatporn Muangpoon, Passiya Jiamsuksujit, Worapong Promsen, VareenaLaohaphan, Witchwaree Theethansiri, Aniwat Sukonthanakul, ApiromYailaibang, Nusorn Chaiyaphom¹, Yanin Preamarrom¹, Suthee Panichkul², Ram Rangsin², Pote Aimpun², Danai Heebthamai², Tanongson Tienthavorn² and Wirote Areekul²

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Background : Many recent studies show that the prevalence of flatfoot in general population is 8-20%. In 2009, the data survey in Moo-16, Baan Na-isan, Tha-Kradansubdistrict, Sanamchaiket district, Chachoengsao found that 30% of population reported knee and ankle symptoms, in which might cause by flatfoot. Surgical treatment for flatfoot is performed 20-25% of cases, however, if detected earlier before the onset of symptoms or at mild stage, non-surgical treatment combined with proper advice and rehabilitation will both prevent and slow down the progression of the disease.

Objectives : To identify prevalence and associated factors of flatfoot, associated factors of symptomatic flatfoot, mean index, and standard deviation calculated by using Harris mat footprint and Staheli index in population aged above 10 years old in Moo-16, Baan Na-isan, Tha-Kradansubdistrict, Sanamchaiket district, Chachoengsao

Methods : We conducted analytical cross-sectional study. Data was collected from population aged above 10 years old who are capable of performing weight-bearing stance in Moo-16, Baan Na-isan, Tha-Kradansubdistrict, Sanamchaiket district, Chachoengsao including interview by using questionnaires to identify associated factors of flatfoot. Participants were then asked to place their feet on Harris Mat Footprint once to obtain footprint. Staheli index was used to measure midfoot/hindfoot ratio. Flatfoot was diagnosed if the calculated index exceeded mean+2SD (0.916)

Results : From all 363 participants with mean age of 38.7 and 56.7% were female, the prevalence of flatfoot was 8.8% and associated factors of flatfoot without differentiation of side of foot were male gender (adjusted PRR 1.58, 95% CI 1.01-2.53), BMI of over 25 kg/m² (adjusted PRR 2.34, 95% CI 1.46-3.76), and trading occupation (adjusted PRR 4.18, 95% CI 2.25-7.76). Male gender tended to use feet more

extensively than female. BMI of over 25 kg/m² might result in excessive load put on both feet than normal weight individual. Trading occupation required prolonged standing activities for more than 8 hours a day and genetics played a role in that flatfoot could be inherited.

Conclusions : The prevalence of flatfoot in this study was as close to those of foreign studies. Associated factors of flatfoot were male gender, BMI of over 25 kg/m², trading occupation, and genetics.

Key Words : ● *Flatfoot* ● *Staheli index* ● *Harris mat footprint*

Abstract no. 10**Factors Affected to Behaviors of Thai Army Trainers in Monitoring and Preventing Heat-related Illness among Privates Trained in Bangkok****Narumol Deechum, Nipawan Somnontad, Julalug Kanjanaroat, Chontichapromtha,****Tipphawan Kawichai, Tipphawan Mongkolsangsuree, Panita Kummoo,****Manadsawad Ladchai, Wannipa Sawomma, Acharawan Weeracthot and Arisra Yurung¹***4th years Nursing Student in from The Royal Thai Army Nursing College; ¹Adviser*

Introduction : The soldiers there are the risk from the sickness because of heat of the trainer for the training recruited private in long-time outdoor. Initial symptoms, it is since a small until dead. These sickness symptoms can protect. Although, Army Medical Department have the arrangement does preventive trend and the treatment because of the heat for the practicing trend to decrease sickness incident because of the heat. But found that, it still has the sickness and dead happen from the sickness because of the heat.

Purposes : The purposes of the study was to the study factors affecting behavior in preventive the sickness because of the heat of the trainer for the training recruited private of army in Bangkok.

Research Format : Research format is Correlative Descriptive Research.

Methods and Materials : The sampling group was the trainer for the training recruited private of army in Bangkok by used was the stratified random sampling by divide is the proportion of the position; follow the table of Taro Yamane. The sampling group was 222 peoples. The instruments used were questionnaires. Separate 6 parts were as follows:

1. Data personal questionnaire.g. age, position, highest education and training experience
2. Supporting questionnaire from an institute
3. Knowledge questionnaire of the trainer for the training recruited private
4. Attitude questionnaire of the trainer for the training recruited private
5. Behavior questionnaire of the trainer for the training recruited private
6. Problem and obstacle questionnaire of the trainer and reliability test of the questionnaire as

follows as; supporting questionnaire from an institute were at .631, knowledge questionnaire were at .661, attitude questionnaire were at .881, behavior questionnaire were .830 and total the reliability test were at .809. Statistical used; first part were; frequency, percentage, mean and standard deviation. Second part were correlation value of data personal by Chi-square test statistic and correlation value from supporting from an institute, knowledge, attitude with behavior in preventive the sickness is because of the heat by

used Pearson Product Moment Correlation Coefficient. Thirdparts were; Factor predicts the behavior used Stepwise Multiple Regression Analysis.

Results : Data personal questionnaire e.g. age, position, highest education and training experience don't correlated with behavior in preventive the sickness because of the heat, supporting from an institute, knowledge and attitude correlated behavior in preventive the sickness because of the heat, the significantly at 0.01 level ($r = 0.368^{**}, 0.303^{**}, 0.186^{**}$ respectively). Factor predicts the behavior in preventive the sickness because of the heat e.g.; supporting from an institute and knowledge can combine to predicts at 17% ($R = .170$) by rearrangethe variable weight in highest predicts as follows as; supporting from an institute and knowledge (Beta .368 and .299, respectively).

Discussion and Conclusions : Supporting from an institute, knowledge and attitude correlated behavior in preventive the sickness because of the heat may because of, when an institute have supporting in alls way in preventive the sickness because of the heat make the trainer there is the confidence in the lead the knowledge used efficiently and the trainer there is good institute but less correlated- practicing might because the trainer don't confidence or might understand that it isn't important. Thus an institute should give the knowledge both the theory and practicing, supporting in alls way and establish the good attitude in preventive the sickness because of the heat, continuously. In the part of data personal questionnaire e.g. age, position, highest education and training experience don't correlated with behavior in preventive the sickness because of the heat may because of, the trainer was received an information, training and the participating in preventive the sickness because of the same heat by while the training that the trainer might never meet sick soldier make have no the experience in treatment the sick soldier because of the heat and the study in past might uneducated about this story but, the trainer was received the training in this story equally and the education in the past might still is uneducated.

Key Words : ● *Data personal (age, position, highest education and training experience)*

- *Supporting from an institute*
- *Knowledge of preventive the sickness because of the heat*
- *Attitude of preventive the sickness because of the heat*
- *Behavior of preventive, the sickness because of the heat*

Abstract no. 11**Innovation of Hand-Woven Cloth Lumbar Support for Sufficiency Community**

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Background : Non-specific low back pain (Non-specific LBP) is one of the most common medical condition which effects on daily life, working effectiveness, and quality of life. Due to health survey in community of Ban-Na-Yao, the authors found 70 % of population had symptoms of non-specific LBP. And from the participatory learning and development on health between community and medical cadet, contributed to a conception for resolving this problem by using lumbar support, that created and developed from regional material according to Sufficiency economic theory.

Objectives : To evaluate the efficacy of the Hand-Woven Cloth Lumbar Support in decreasing the severity of Non-specific LBP

Study Design : Field Trials: Non-randomized controlled trial.

Materials and Methods : The authors divided 186 participants into 2 groups by geographical area: intervention group (N=92) treated with a Hand-Woven Cloth Lumbar Support and a control group (N = 94). Data collection with baseline characteristics of participants and standard questionnaires for LBP evaluation (Oswestry Low Back Pain Disability Score and Pain score). And follow-up clinically of low back pain, Hand-Woven Cloth Lumbar Support usage and medical consumption by Village Health Volunteer every week and by the authors every month for 6 months in both group.

Results: One hundred seventy eight participants have attended for 6 months (89 patients in each group). The results from Two-ways repeated measures ANOVA, found participant grouping factor to intervention and control group affected to changing of Oswestry LBP Disability Score and Pain score (P-value < 0.001, < 0.001 respectively), and significant reduction rate in Oswestry LBP Disability Score in intervention group than control group between 0th month and 6th month (19.93 ± 12.38 vs 11.42 ± 16.07 ; P-value < 0.001). Respectively significant reduction rate in pain score was also noticed (3.36 ± 2.11 vs 2.45 ± 2.27 ; P-value < 0.001). Medical consumption significant reduction in intervention group more than control group (the

proportion of patients who did take analgesics in Intervention group is 0.98 day/week VS 2.28 day/week in Control group; P-value < 0.001)

Conclusion : Hand-woven cloth lumbar support is an index for significantly reduction in Oswestry low back pain disability score, pain score and medical consumption, that affected to reduced severity of low back pain and improved quality of life. The presented may be useful to prescribe of Hand-Woven Cloth Lumbar Support as a complementary and non-pharmacologic treatment beside the conventional medication used in non-specific low back pain treatment.

Key Words : ● *Lumbar support* ● *Hand-woven cloth lumbar support* ● *Non-specific low back pain*

Abstract no. 12**Prevalence and Risk Factors of Anemia in Pregnant Women
at Bangkhla Hospital Chachoengsao**

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Background : Anemia during pregnancy continues to be a common clinical problem with high rates of prevalence (4.1 to 38.6%) in Thailand. While Ministry of Public Health of Thailand aims to reduced anemic pregnant women to less than 10%. The impact of anemia in pregnancy affects both mother and fetus such as maternal deaths, preterm delivery, low birth weight, stillbirth and neonatal death.

Objectives : To estimate the prevalence and determine risk factors associated with anemia among pregnant woman in order to identify their problems and to easily provide them with the clinical services in Bangkla hospital.

Methods : We conducted analytical cross-sectional study. Descriptive study with retrospective data collection of 170 cases of newly registered antenatal care pregnant women was conducted between January 1-September 30, 2011. The obstetric factors were recorded. The data were analyzed by chi-square test and logistic regression.

Results : From the study, the prevalence of anemia in pregnancy in Bangkla hospital was 17.1% (Hb < 11 g/dL in every trimester). In univariate and multivariate analysis only one risk factor was significantly affected hemoglobin level. That was having first antenatal care in second trimester (15-28 weeks) had 3.335 times increase risk of anemia compared with women that having first antenatal care in first trimester and having first antenatal care in third trimester (29-42 weeks) had 4.65 times increase risk of anemia compared with women that having first antenatal care in first trimester.

Conclusions : The prevalence of anemia in pregnancy at Bangkhla Hospital increased with increased trimester of pregnancy. Factor associated with anemia during pregnancy was gestational age in second and third trimester, therefore promoting early antenatal care should be consider in this community to reduced anemic pregnancy.

Key Words : ● Anemia ● Pregnancy ● Trimester ● Mortality/morbidity

Abstract no. 13

Prevalence and Risk Factors of Suicidal Risk in the Population Whom Flood Victims were Treated by the Mobile Medical Unit at Thawung District, Lopburi Province

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Background : Suicide is an action that has high impact on the actor, Family and social itself. And cause various problems such as premature death. The loss cost for treatment of illnesses of the body from committing suicide. Psychological impacts on the minds of relatives are also considered. In the present situation with flooding problems, which cause loss of property. The biggest trouble of many households. These events are caused of problems and stress. That may induce an idea or suicidal behaviors occur there. These study was created for screening and to find out the prevalence and risk factor of suicidal risk in the population whom flood victims

Methods : We conducted cross-sectional study by convenience sampling. Convenient sampling was chosen method. Participant was screened by 2 query created by Thailand Ministry of Health. Mobile medical unit start asking the first, ST-5 query for evaluate the stress level. And the letter, DS8 query that used to find out the suicidal risk of participant. Demographic data was collected, calculated and looked for association.

Results : Four hundred and two participants from 6 districts was screened. Seventy-three point four percent was female and the others was male. Twenty-one point two percent of participants identified into high - very high stress level group. Thirty point eight four percent of these group diagnose depressive disorder. Mostly was middle-aged and elderly. In elderly group have 2.13 fold (compared with another age groups) trend to have suicidal risk (P-Value = 0.043). Uneducated participant have 4.93 fold (compared with educated participant) trend to have suicidal risk (P-Value = 0.007). Participants who suffered with chronic medical illness (T2DM and HTN) have 3.91 fold (compared with healthy participant) trend to have suicidal risk (P-Value = 0.023). Participants who identified into high - very high stress level group have 2.92 fold trends to have suicidal risk (P-Value < 0.001). And in the Participants who diagnose depressive disorder have 2.62 fold trend to have suicidal risk (P-Value = 0.005)

Conclusions : In the early stage of flood, the elderly, uneducated, suffered with chronic medical illness (T2DM and HTN), high - very high stress level participants and patients with depression. are trend to have suicidal risk with statistic significant. Family, health care worker, should be evaluated, considered, counseled, and monitored closely until the floods ravel to prevent PTSD or committed suicide.

Key Words : ● Flood ● Mobile medical unit ● Elderly ● Uneducated ● Chronic medical illness
● T2DM ● HTN ● Depression ● Suicide

Abstract no. 14**The Evaluation of Rating Perceived Exertion By Using Borg's scale, Visual Analogue Scale, and Likert Scale of Sedentary Subjects During Exercise at Heavy Intensity****Piyathida Wangjongmeechaikul, Patrawut Intarakamhang, Preecha Aeirojankoon and Pote Aimpun***Department of Physical Medicine and Rehabilitation, Phramongkutkiao Hospital*

Background : The physiologic changes during heavy exercise can be evaluated by many methods such as to measure heart rate, blood lactate level, and VO₂max. Even though all previous mentioned have more accuracy, the processes are more complicated as well. So many questionnaires are recommended to be used. There has been still no conclusive data which one is the most correlated with the rate perceived exertion in sedentary people during heavy exercise so far.

Objectives : To evaluate the results of rating perceived exertion after exercise at heavy intensity by sedentary subjects using 3 different rating scales: Borg's scale, Visual Analogue scale, and Likert scale.

Methodology : Descriptive study was conducted. Seventy three sedentary subjects were recruited and divided into 3 groups by random blocks. Every subjects was thoroughly informed how to assess his or her level of exertion using those 3 scales. Then they started working out on a treadmill, which was already set. When finished, they needed to rate their level of exertion using the assigned scales.

Results : The average scale obtained from the first group using Borg's scale is 13.46 (SD = 1.772). The second one using VAS scale is 6.83 (SD = 1.09). After statistical analysis, it is found that there is no difference in determining perceived exertion between these 2 groups (Borg's scale ≥ 15 and VAS scale ≥ 7 , $P=0.084$). However, the scale obtained from the group using Likert scale is different. About 26.09% of this group rated scale 2 (equals to mild to moderate exertion), while the other 73.9% rated scale 3 (equals to moderate to high exertion).

Conclusion : The Borg's and VAS scale have no difference in assessing perceived exertion of sedentary subjects during exercise at heavy intensity, but the Likert scale is not recommended to be used in this scheme.

Key Words : ● *Perceived exertion* ● *Borg's scale* ● *VAS* ● *Likert scale*

Abstract no. 15

Incidence and Intrinsic Risk Factors of Musculoskeletal Injury in 2nd Year Medical Cadets during Military Training

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Background: Musculoskeletal injuries occur frequently in military training. Numerous studies of military trainees, Injury incidence ranging from 14% to 42% among men and from 27% to 61.7% among women and the risk factors were female, history of previous injury, smoking, physical activity, body mass index, aerobic capacity, muscle strength, flexibility, foot morphology, Q angle, capacity of push up and running. The injury lead to many lost training days and financial burden.

Objective: To study cumulative incidence and intrinsic risk factors of musculoskeletal injury in 2nd year medical cadets during 15 weeks of military training.

Methodology: Prior to training, subjects were evaluated by questionnaires and measurements of physical fitness. The musculoskeletal injuries were diagnosed and recorded by researcher during 15 weeks of military training. Intrinsic risk factors were analyzed after finishing training.

Result: Ninety-three subjects (60.2% men) were studies with median age of 19 years old (range for between 18 to 20). Fifteen weeks of military basic training, cumulative incidence of subjects with one or more military training-related injury was 75.3%. The five most common diagnosis were 52.69% Muscle strain/Myofascial pain syndrome, 27.96% Joint sprain, 17.2% Tendinitis/Enthesitis, 16.13% Low back pain and 11.83% Petellofemeral pain syndrome. Cumulative incidence of injury at common site was 62.63% to lower extremity and 27.27% to upper extremity. The significant intrinsic risk factors were identified, including: Female (P = 0.002, Adjusted RR = 9.079, 95%CI = 2.243 – 36.747) and low physical activity before entry (P = 0.041, Adjusted RR = 3.916, 95%CI = 1.059 – 14.485).

Conclusion: Cumulative incidence of subjects with one or more military training-related injury was 75.3%, significant intrinsic risk factor were female and low physical activity before entry.

Key Words : ● *Musculoskeletal injury* ● *Military training* ● *Medical cadets*

Abstract no. 16

Factors Related to Success of Acupuncture in Low Back Pain

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Background : Low back pain (LBP) is the 3rd most common outpatient problem in Thailand. Treatment of LBP cost 16 million dollars per years in United State. Acupuncture is approved by WHO to be an effective treatment in LBP. There are many studies about effectiveness of acupuncture in LBP, but no data on the factors that related to success of acupuncture in LBP.

Objective : To identify factors related to success of acupuncture in low back pain

Methodology : This study was a clinical trial. All potential factors related with low back pain (LBP) were collected from personal history, physical examination and X-ray imaging of LBP patients visiting Outpatient Department, Department of Physical Medicine and Rehabilitation, Phramongkutklao Hospital during June 2010 to May 2011. All subjects received manual acupuncture twice a week for 15 times. Outcomes were assessed using visual analogue scale (VAS) at baseline, after 5th 10th and 15th visit.

Results : One hundred forty four subjects were recruited, which 73.6% were female, mean ages 56.1 (SD 13.1) years. The median duration of having LBP was 24 (0-396, IQR 56) months. Mean baseline VAS was 58.5 (SD 22.2) mm. VAS score had mean 25.8 (SD 26.8) mm reduction at end session. Treatment success was defined as at least 50% improvement in VAS score. Those who had less than 6 months-duration of LBP were 1.77 times more likely to archive the treatment goal than who had longer periods of LBP ($p=0.041$). Additional factor was baseline VAS score. Subject with baseline VAS ≥ 80 mm were 2.03 times more likely to be success from the treatment ($p = 0.003$).

Conclusion : The study suggested that patients who have duration of low back pain less than 6 months or baseline VAS more than 80 mm. tend to success from acupuncture.

Key Words : ● *Acupuncture* ● *Factors* ● *Low back pain*

Abstract no 17

Cost-effectiveness of Hospital-based Aerobic Exercise Program in Type 2 Diabetes Mellitus Patients

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Background : The type II diabetes is extremely important in developing countries which shortage of health resources to provide adequate treatment. Exercise is essential in controlling diabetes however exercise in patients with diabetes needs to be done with caution because the risk of conditions. Hospital-based aerobic exercise program is the safest under the supervision of expert but this program would have cost more. There are no data on the cost-effectiveness of exercise to reduce blood levels of Hb A1C at the hospital in patients with type 2 diabetes.

Objective : To study the cost-effectiveness of hospital-based aerobic exercise program to reduce blood levels of Hb A1C in type 2 Diabetes Mellitus patients

Methodology : Seventy patients selected to the hospital-based aerobic exercise by cycling at least 3 times per week for 8 weeks of 34 patients or the control group who did not choose an exercise program of 36 patients. Both groups answered the estimated cost questionnaire and were measured BMI, Hb A1C, Cholesterol, HDL, LDL and TG at prior to intervention and follow up lasted 8 weeks. The cost-effectiveness was measured as costs spent on one patient with reduced Hb A1C, at least 0.1 percent.

Results : Exercise group with Hb A1C, BMI decreased and HDL increased significantly compared with control group the $P = 0.002$, $P < 0.001$ and $p = 0.016$, respectively. The provider perspective costs were 69,761 baht in exercise group and 17,120 baht in control group. The cost in patient perspective was 162,908 baht in exercise group. The number of individuals who changed in Hb A1C at least 0.1 percent was 26 patients with exercise group and 9 patients with control group.

Conclusion : The cost-effectiveness in provider perspective to result one case of diabetes patient with decreased Hb A1C value at least 0.1 percent was 2,683.12 baht in exercise group and 1,902.22 baht in control group. The cost-effectiveness in patient perspective was 6,265.69 baht in exercise group.

Key Words : ● *Cost-effectiveness* ● *Hospital-based aerobic exercise program* ● *Type II diabetes*

Abstract no. 18

Wii-hab Training Enhances Motor Recovery and Motor Function of Upper Extremity in Subacute Stroke Patients : A Randomized Controlled Clinical Trial, Pilot Study

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Background : Stroke represent one of the main causes of adult disability resulting in impairment of upper extremity which diminished quality of life. There are many neuro-science technologies which promote the upper extremity recovery. And Wii-hab is one of these technologies, based on Virtual reality system, used for rehabilitation.

Objectives : To evaluate the effectiveness of Wii-Hab training on motor recovery and motor functions of upper extremity in stroke patients.

Methodology : Hemiplegic stroke patients were randomly assigned to either the Wii-hab group (n=10) or the control group (n=10). Both Wii-hab and control group participated in a conventional stroke rehabilitation program, 5 days a week, for 4 weeks. The intervention group received an additional of 30 minutes of Wii-hab training program consisting of shoulder flexion, abduction, internal-external rotation, elbow flexion-extension, wrist flexion-extension and finger flexion movements. The Outcome Measurements were Brunnstrom stages of motor recovery, spasticity assessed by the Modified Ashworth Scale (MAS) and upper extremity-related function(Motor assessment scale) which were measured at pre-intervention, after completion of intervention and at 4th week of follow-up visit.

Results : A total of 20 patients with stroke, 13 males and 7 females, were studied with mean age of 57.3 ± 11 years old. There was no significantly difference of demographic data between 2 groups. The Brunnstrom stages for upper extremity and the Motor Assessment Scales showed significantly more improvements in the Wii-hab group than the control group at after completion of intervention and at 4th week of follow-up visit ($P < 0.05$). No significant difference was found between two groups for the upper extremity spasticity assessed by the MAS.

Conclusions : The Wii-hab training in conjunction with conventional stroke rehabilitation program enhance motor recovery and motor functions of upper extremity in subacute stroke patients compared to conventional rehabilitation.

Key Words : ● *Wii-hab* ● *Stroke* ● *Motor recovery* ● *Upper extremity* ● *Brunnstrom stages*
● *Motor assessment scale* ● *Modified ashworth scale*

บทคัดย่อที่ 19

การตรวจสอบการใส่หลอดสอดคาทอลัมในภาวะฉุกเฉินโดยใช้ชุดอุปกรณ์ตรวจสอบคาร์บอนไดออกไซด์ในลมหายใจออกชนิดเปลี่ยนสี ที่ประดิษฐ์เองของโรงพยาบาลพระมงกุฎเกล้า

เฉลิมรัตน์ เพียรพืงตน

กองอุบัติเหตุและเวชกรรมฉุกเฉิน โรงพยาบาลพระมงกุฎเกล้า

ข้อมูลพื้นฐาน : การตรวจสอบการใส่หลอดสอดคาทอลัมมีความสำคัญอย่างยิ่งในผู้ป่วยที่ใส่หลอดสอดคาทอลัมเพื่อช่วยการหายใจ เนื่องจากหากหลอดสอดคาทอลัมดังกล่าวเข้าไปอยู่ในหลอดอาหารโดยที่แพทย์หรือบุคลากรทางการแพทย์ไม่สามารถตรวจสอบได้อาจส่งผลเสียต่อผู้ป่วย ในต่างประเทศมีเครื่องมือที่ใช้ตรวจสอบการใส่หลอดสอดคาทอลัมโดยวัดคาร์บอนไดออกไซด์ในลมหายใจออกซึ่งมีราคาแพง จากเหตุผลดังกล่าวทางกลุ่มผู้วิจัยได้เล็งเห็นถึงความสำคัญของอุปกรณ์ตรวจสอบการใส่หลอดสอดคาทอลัมจึงประดิษฐ์อุปกรณ์ที่มีความสามารถทัดเทียมกับอุปกรณ์การตรวจสอบการหายใจที่จำหน่ายในต่างประเทศ แต่ราคาถูกกว่าและใช้วัสดุที่หาได้ง่ายสามารถผลิตใช้ได้เอง

วัตถุประสงค์ : ศึกษาเปรียบเทียบความไวและความจำเพาะระหว่างชุดตรวจสอบคาร์บอนไดออกไซด์ในลมหายใจออกชนิดเปลี่ยนสีได้ที่ประดิษฐ์เองของโรงพยาบาลพระมงกุฎเกล้า กับเครื่องตรวจสอบความระดับของคาร์บอนไดออกไซด์ในลมหายใจออกในผู้ป่วยที่ใส่หลอดสอดคาทอลัมในภาวะฉุกเฉินห้องฉุกเฉิน โรงพยาบาลพระมงกุฎเกล้า

วิธีการศึกษา : เก็บรวบรวมข้อมูลแบบไปข้างหน้า (prospective study) ในผู้ป่วยที่ใส่หลอดสอดคาทอลัมในภาวะฉุกเฉินห้องฉุกเฉิน โรงพยาบาลพระมงกุฎเกล้า จำนวน 146 คน ในช่วงวันที่ 1 พฤศจิกายน 2553 ถึง 31 สิงหาคม 2554 โดยเปรียบเทียบค่าจากเครื่องตรวจวัดค่าแก๊สคาร์บอนไดออกไซด์ในลมหายใจออกกับการเปลี่ยนแปลงของสีจากชุดอุปกรณ์ตรวจสอบคาร์บอนไดออกไซด์ในลมหายใจออกชนิดเปลี่ยนสีที่ประดิษฐ์เองของโรงพยาบาลพระมงกุฎเกล้า

ผลการศึกษา : จากการศึกษาในผู้ป่วยใส่หลอดสอดคาทอลัมในภาวะฉุกเฉินห้องฉุกเฉิน โรงพยาบาลพระมงกุฎเกล้า จำนวน 146 คน พบว่า ชุดอุปกรณ์ตรวจสอบคาร์บอนไดออกไซด์ในลมหายใจออกชนิดเปลี่ยนสีที่ประดิษฐ์เองของโรงพยาบาลพระมงกุฎเกล้า มีความไว (sensitivity) ร้อยละ 92.1 ความจำเพาะ (specificity) ร้อยละ 64.4 และค่าความถูกต้อง (accuracy) ร้อยละ 83.6 เมื่อเปรียบเทียบกับเครื่องตรวจวัดค่าแก๊สคาร์บอนไดออกไซด์ในลมหายใจออก

สรุป : ชุดอุปกรณ์ตรวจสอบคาร์บอนไดออกไซด์ในลมหายใจออกชนิดเปลี่ยนสี ที่ประดิษฐ์เองของโรงพยาบาลพระมงกุฎเกล้า มีความน่าเชื่อถือในการตรวจสอบหลอดสอดคาทอลัมในผู้ป่วย

Key Words : ● หลอดสอดคาทอลัม ● คาร์บอนไดออกไซด์ในลมหายใจออก

บทคัดย่อที่ 20

การประเมินปริมาณสารน้ำในหลอดเลือดโดยการวัดคลื่นเสียงสะท้อนความถี่สูงวัดขนาดเส้นผ่านศูนย์กลางหลอดเลือดดำอินฟีเรียร์เวนาคาวา

โคภินันท์ ชัยพิริยะศักดิ์

กองอุบัติเหตุและเวชกรรมฉุกเฉิน โรงพยาบาลพระมงกุฎเกล้า

ข้อมูลพื้นฐาน : การประเมินปริมาณน้ำในหลอดเลือด (intravascular volume) โดยการใส่หลอดเลือดสวนทางหลอดเลือดดำส่วนกลาง เพื่อวัดความดันในหลอดเลือดดำใหญ่ (Central Venous Pressure : CVP) เป็นหัตถการที่มีความจำเป็นสำหรับการดูแลผู้ป่วยที่อยู่ในภาวะวิกฤตที่มีภาวะติดเชื้อในกระแสเลือดที่รุนแรงตามแนวทางการรักษา Early Goal Directed Therapy แต่ทั้งนี้หัตถการเกือบทุกอย่างถึงแม้จะทำด้วยความระมัดระวังอย่างดีแล้วก็ยังอาจเกิดภาวะแทรกซ้อนได้ และยังเป็นวิธีที่รุกราน (Invasive) ทำให้ผู้ป่วยเจ็บปวด ดังนั้นการนำคลื่นเสียงสะท้อนความถี่สูง (ultrasonography) มาใช้ประเมินปริมาณน้ำในหลอดเลือด และประมาณค่าความดันในหลอดเลือดดำใหญ่ (CVP) นอกจากจะช่วยลดการเกิดภาวะแทรกซ้อนแล้วยังเป็นวิธีที่ไม่รุกราน (non-invasive) อีกทั้งช่วยลดการใช้ทรัพยากรและเวลาในการทำหัตถการอีกด้วย

วัตถุประสงค์ : ศึกษาวิธีการประเมินความสัมพันธ์ระหว่างปริมาณน้ำในหลอดเลือดเปรียบเทียบกับดัชนีการยุบลงของเส้นผ่านศูนย์กลางของหลอดเลือดดำอินฟีเรียร์เวนาคาวาขณะหายใจเข้าและออกเต็มที่ (Inferior Vena Cava collapsibility index : IVC-CI) จากการวัดคลื่นเสียงสะท้อนความถี่สูง (ultrasonography) และศึกษาความสัมพันธ์ระหว่างการนำขนาดเส้นผ่านศูนย์กลางของหลอดเลือดดำอินฟีเรียร์เวนาคาวาต่ำสุดที่มาคำนวณสูตรหาค่าเฉลี่ยความดันของหลอดเลือดดำขนาดใหญ่เทียบกับค่าความดันของหลอดเลือดดำขนาดใหญ่ที่วัดได้จริง ในผู้ป่วยที่ห้องฉุกเฉิน โรงพยาบาลพระมงกุฎเกล้า

วิธีการศึกษา : การศึกษาแบบไปข้างหน้า (prospective study)

วิธีการ : ทำการเก็บรวบรวมข้อมูลในผู้ป่วยที่มีรับการรักษาที่ห้องฉุกเฉินของโรงพยาบาลพระมงกุฎเกล้า ร่วมกับมีข้อบ่งชี้และไม่มีข้อห้ามในการทำหัตถการใส่หลอดเลือดสวนทางหลอดเลือดดำส่วนกลางและไม่มีข้อห้ามในการวัดคลื่นเสียงสะท้อนความถี่สูง จำนวน 45 ราย ตั้งแต่ 1 ตุลาคม 2553 ถึง 31 มีนาคม 2554

ผู้ป่วยและญาติได้รับคำแนะนำและให้ความยินยอมก่อนเข้าร่วมการศึกษา โดยผู้ป่วยทุกรายที่มีข้อบ่งชี้ในการได้รับการใส่หลอดเลือดสวนทางหลอดเลือดดำอินเทอนอลจูกูลา (internal jugular vein) ด้านขวาตามวิธีการมาตรฐานโดยแพทย์ประจำบ้านสาขาเวชศาสตร์ฉุกเฉินชั้นปีที่ 1 ถึง 3 ภายใต้การดูแลของอาจารย์แพทย์เฉพาะทางเวชศาสตร์ฉุกเฉิน และทำการวัดความดันหลอดเลือดดำส่วนกลาง (CVP)

ในขณะเดียวกันผู้ศึกษาหรือผู้เข้าร่วมการศึกษาก็จะทำการวัดคลื่นเสียงสะท้อนความถี่สูง (ultrasonography) วัดขนาดเส้นผ่านศูนย์กลางของหลอดเลือดดำอินฟีเรียร์เวนาคาวาขณะหายใจเข้าและออกเต็มที่ โดยใช้ระบบสองมิติ (2-Dimension) หรือระบบเอ็ม (M-mode) ที่ตำแหน่ง 2 เซนติเมตรจากจุดที่เชื่อมกับหัวใจห้องบนขวา พิมพ์ผลภาพ และลงบันทึกไว้ จากนั้นประเมินความสัมพันธ์ระหว่างปริมาณน้ำในหลอดเลือดเปรียบเทียบกับดัชนีการยุบลง และคำนวณค่าเฉลี่ยความดันของหลอดเลือดดำขนาดใหญ่จากสูตร แล้วนำมาเปรียบเทียบกับค่าความดันของหลอดเลือดดำส่วนกลาง (CVP) ที่วัดได้จริง

ผลการศึกษา : จากการวิเคราะห์ความสัมพันธ์ระหว่างปริมาณน้ำในหลอดเลือดโดยพิจารณาจากความดันหลอดเลือดดำส่วนกลางเปรียบเทียบกับดัชนีการยุบลงของเส้นผ่านศูนย์กลางของหลอดเลือดดำอินฟีเรียร์เวนาคาวาขณะหายใจเข้าและออกเต็มที่ พบว่ามีความสัมพันธ์ในทิศทางตรงกันข้ามอย่างมีนัยสำคัญทางสถิติ (ค่า $r = 0.791$, $p \leq 0.001$)

จากสูตร $CVP = 4.6 + (4.8 \times IVC \text{ min})$ เมื่อเปรียบเทียบค่าเฉลี่ยความดันหลอดเลือดดำส่วนกลางที่คำนวณได้กับค่าที่วัดได้จริงจากการใส่หลอดสวนทางหลอดเลือดดำใหญ่พบว่ามีความสัมพันธ์อย่างมีนัยสำคัญ (ค่า $r = 0.887$, $p \leq 0.001$)

สรุป : การทำคลื่นเสียงสะท้อนความถี่สูงเป็นอีกหนึ่งทางเลือกที่มีความเหมาะสมในการช่วยประเมินปริมาณน้ำในหลอดเลือดในผู้ป่วยที่อยู่ในภาวะวิกฤต และสามารถนำสูตรมาคำนวณหาค่าเฉลี่ยความดันหลอดเลือดดำส่วนกลางได้

Key Words : ● อินพีเรียร์เวนาคาวา ● ดัชนีการยุบลงของขนาดเส้นผ่านศูนย์กลางหลอดเลือดดำอินพีเรียร์เวนาคาวา
● คลื่นเสียงสะท้อนความถี่สูง

บทคัดย่อที่ 21

ระดับเอนไซม์เนื้อเยื่อในเลือดที่ใช้พยากรณ์ความรุนแรง ในผู้ใหญ่ที่ป่วยเป็นไข้เลือดออก

สัจจะ ชลิตาภรณ์

กองอุบัติเหตุและเวชกรรมฉุกเฉิน โรงพยาบาลพระมงกุฎเกล้า

ข้อมูลพื้นฐาน : ไข้เลือดออกจัดเป็นโรคที่ส่งผลกระทบต่อสุขภาพของประชากรโลกและระบาดมากที่สุดโรคหนึ่ง โดยเฉพาะประชากรในประเทศแถบเขตร้อนชื้น หลายปีที่ผ่านมาพบว่าผู้ป่วยไข้เลือดออกเพิ่มสูงขึ้นทุกปี โดยเฉพาะประเทศไทย ส่วนหนึ่งของผู้ป่วยจะเข้ารับบริการในห้องฉุกเฉิน ซึ่งเป็นด่านหน้าที่สำคัญในการคัดกรองผู้ป่วยเพื่อเข้ารับไว้ในโรงพยาบาล โดยในผู้ใหญ่ที่ป่วยเป็นไข้เลือดออก มีโอกาสเกิดช็อกและการทำงานของอวัยวะล้มเหลวมากกว่าในเด็ก ส่วนมากจะไม่พบอาการแสดงถึงความรุนแรงในช่วงแรก จึงเป็นเรื่องสำคัญที่ต้องมีเครื่องมือใช้คัดกรองผู้ป่วย เพื่อเลือกผู้ป่วยไข้เลือดออกที่มีความรุนแรงรับไว้ในรักษาอย่างเหมาะสมและเฝ้าระวังอาการดังกล่าวอย่างใกล้ชิด

วัตถุประสงค์ : ศึกษาความสัมพันธ์ของระดับเอนไซม์เนื้อเยื่อในเลือด Aspartate aminotransferase (AST), Lactate dehydrogenase (LDH) ที่ใช้พยากรณ์อาการรุนแรงของโรคไข้เลือดออก เพื่อไปใช้กับผู้ป่วยไข้เลือดออกที่รับการตรวจ

วิธีการศึกษา : Prospective, observational cohort study

กลุ่มประชากร : ผู้ป่วยไข้เลือดออกที่มีอายุตั้งแต่ 18 ปีที่ได้รับการตรวจและรับการรักษาในหอผู้ป่วยสังเกตอาการโรงพยาบาลพระมงกุฎเกล้า ในช่วงตั้งแต่ 1 กันยายน 2553 - 31 สิงหาคม 2554

วิธีการ : ทำการศึกษาเป็นเวลา 1 ปีโดยรวบรวมผู้ป่วยไข้เลือดออกที่รับไว้ในหอผู้ป่วยสังเกตอาการ โดยผู้ป่วยจะได้รับเอกสารชี้แจงข้อมูลที่ได้การรับรองจากคณะกรรมการพิจารณาโครงการวิจัย กรมแพทยทหารบก โดยผู้ป่วยต้องยินยอมก่อนเข้าร่วมโครงการ และแพทย์ผู้ทำการวิจัยจะทำการซักประวัติ ตรวจร่างกาย และพิจารณาส่งตรวจทางห้องปฏิบัติการ เพื่อตรวจหาระดับเอนไซม์ในเลือดและยืนยันการติดเชื้อไข้เลือดออกโดยวิธี ELISA รวมทั้งสังเกตอาการและอาการแสดงโรคไข้เลือดออกในโรงพยาบาล

การวิเคราะห์ผลการวิจัย :

สถิติเชิงพรรณนา : จำนวน ร้อยละ ค่าเฉลี่ย ค่ามัธยฐาน ส่วนเบี่ยงเบนมาตรฐาน (SD) ค่าต่ำสุดและค่าสูงสุด

สถิติเชิงอนุมาน : การเปรียบเทียบความแตกต่างของระดับเอนไซม์เนื้อเยื่อในเลือด Aspartate aminotransferase (AST), Lactate dehydrogenase (LDH) ระหว่างกลุ่มไข้เลือดออกชนิดรุนแรงและกลุ่มชนิดไม่รุนแรง กรณีข้อมูลเป็นแบบแจกแจงนับใช้สถิติ Chi-square test, ข้อมูลเป็นแบบต่อเนื่องใช้สถิติ Mann-Whitney U test และการวิเคราะห์ความสัมพันธ์ของระดับเอนไซม์ โดยควบคุมอิทธิพลของปัจจัยอื่นใช้สถิติ Multiple logistic regression และกำหนดระดับนัยสำคัญเท่ากับ 0.05

ผลการศึกษา : จำนวนผู้ป่วยทั้งหมด 73 ราย มีชนิดรุนแรง (severe manifestation) 65 รายและชนิดไม่รุนแรง (non-severe manifestation) 8 ราย พบว่าผู้ป่วยชนิดรุนแรงจะมีระดับ LDH ตั้งแต่ 300 U/L หรือตั้งแต่ระดับ 1.7 เท่าของค่าปกติและระดับ AST ตั้งแต่ 3 เท่าของค่าปกติ ได้มากกว่าอย่างมีนัยสำคัญ ($p = 0.031, 0.003$ และ 0.05 ตามลำดับ)

สรุป : ถ้าผู้ป่วยมีระดับ LDH 300 U/L หรือที่มากกว่า 1.7 เท่าของค่าปกติ รวมทั้งระดับ AST ที่มากกว่า 3 เท่าของค่าปกติ จะบอกถึงผู้ป่วยไข้เลือดออกที่มีอาการรุนแรง ซึ่งจำเป็นต้องรับไว้ในเฝ้าระวังอาการอย่างใกล้ชิด

Key Words : ● ไข้เลือดออก ● ไข้เลือดออกชนิดรุนแรง ● Aspartate aminotransferase ● Lactate dehydrogenase

Abstarct no. 22

Correlation of Axial Length Measurement and Refractive Outcomes Prediction Between Immersion Ultrasound Biometry and Laser Interferometry (IOL Master) in Phramongkutklao Hospital

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Background : Cataract extraction with implantation of intraocular lens is one of the most frequently performed ophthalmic procedures. Although good surgical techniques, accurate IOL power and preoperative measurement of the ocular axial length (AL) are important factor in achieve expected refractive results. Ultrasonography remains the preferred method of measuring the ocular AL. The Laser Interferometry based prototypes of IOLMaster was developed in the past decade for noninvasive measurement and recent use in Phramongkutklao Hospital.

Objective : To determine the correlation of immersion ultrasound biometry and laser interferometry (IOL master) in axial length measurement and refractive outcome prediction after cataract surgery in Phramongkutklao Hospital

Design : Prospective analytic study.

Methodology : This study was conducted on 64 consecutive patients with age-related cataract who were schedule for cataract surgery at Phramongkutklao Hospital during Febuary 2011 to July 2011. All patient underwent axial length measurement by both immersion ultrasound biometry and IOLMaster. Target refraction was estimated by SRK-T formula using data from both methods. Refractive deviation and correlation were determine at 4th weeks post surgery.

Results : Sixty-four patients, 68.5 (SD 9.7) years of age, underwent uncomplicated phacoemulsification with IOL implantation. The optical axial length obtained by the Immersion ultrasound compared with IOLMaster not differ significantly (23.58 ± 0.64 vs. 23.59 ± 0.65 mm; $P = 0.066$). There was high correlation between two biometry with correlation coefficient = 0.926. At 4th weeks Postoperatively, the mean spherical equivalent was -0.30 ± 0.44 (diopters) D. Final refractive outcome was 0.40 ± 0.38 D more hypermetropic than the target refraction when using the immersion ultrasound compared with 0.38 ± 0.35 D more hyperopic when using IOLMaster ($P=0.895$). Seventy one point nine percent of patients were within 0.25D of target refraction and 96% were within 0.5D when the Immersion ultrasound was used, compared with 84% and 95% within 0.25 and 0.5D respectively when using IOL Master.

Conclusions : High correlations of axial length measurement by both biometry. And using IOL Master produces a more predictive refractive outcome than immersion ultrasound.

Key Words : ● Refractive outcomes ● Correlation of axial length ● IOL Master ● Immersion ultrasound

Abstarct no. 23**Prevalence of Left Common Iliac Vein Compression in Asymptomatic Thai People by 64 Slices Multidetector Computed Tomography (MDCT) Scan of Abdomen at Phramongkutklao Hospital****Wanvisa Charoenwat, Chutcharn Kongphanich and Supakajee Saengruang-orn***Department of Radiology, Phramongkutklao Hospital*

Background : Compression of the left iliac vein against the fifth lumbar vertebra by the right iliac artery is a well-known anatomic variant. This anatomical variation is associated with acute venous thrombosis of the left iliac vein or May-Thurner syndrome. The prevalence of compression of the left iliac vein by right common iliac artery in asymptomatic disease had not been established in Thailand.

Objective : To determine the prevalence of left common iliac vein compression in an asymptomatic Thai people by 64 slices Multidetector Computed Tomography (MDCT) scan of abdomen at Phramongkutklao Hospital.

Methodology : A retrospective study of 280 abdominal MDCT from March 2011 to August 2011 at Phramongkutklao Hospital were done to determine the prevalence of anatomical variation of left common iliac vein.

Results : Among 280 abdominal MDCT studies, the prevalence of compression of left common iliac vein by right common iliac artery was 11.40%. Mean diameter of left common iliac vein was 7.51 mm. and standard deviation was 0.21. The minimal and maximal diameter of left common iliac vein in asymptomatic people were 1.50 mm. and 17.30 mm., respectively.

Conclusion : Sixty four slices MDCT provides a reliable method to evaluate the anatomical variation of left common iliac vein, ranging from 1.5 mm. to 17.30 mm. and mean diameter is 7.51 mm. Only diameter of left common iliac vein is not suitable for diagnosis May-Thurner syndrome in Thai people.

Key Words : ● *Anatomical variation* ● *Common iliac vein* ● *DVT* ● *May-Thurner syndrome*
● *Multidetector Computed Tomography*

Abstract no. 24**Anatomical Variations of Branches of Aortic Arch by 64 Slices Multidetector Computed Tomography (MDCT) Scan of Thorax at Phramongkutklao Hospital****Phupoom Wutitada, Anuchit Routhantong and Supakajee Saengruang-Orn***Department of Radiology, Phramongkutklao Hospital*

Background : The knowledge about variations of branches of aortic arch is very important in medical practice. With the increase in recent years of thoracic aortic procedures, recognition of these variations has assumed greater importance, to ensure safer and more accurate endovascular and surgical planning. MDCT allows confident detection and classification of a variety of anatomic and incidental anomalies.

Objective : The goal of this study is to describe anatomical variation of branches of aortic arch by 64 slices MDCT at Phramongkutklao Hospital.

Material and Methods : A retrospective review of 296 thoracic MDCT studies at Phramongkutklao Hospital from January 2009 to July 2011 were done to determine the prevalence of each anatomical variation of branches of aortic arch.

Results : Among 296 thoracic MDCT studies, the anatomical variation of branches of aortic arch are 20.3%. The most common anatomical variation of branches of aortic arch is common origin of the innominate and left common carotid arteries, presented in 12.8%. The second is left vertebral artery arising directly from the aortic, found in 4.4%. The rest of aortic arch variants are aberrant right subclavian artery and thyroidea ima artery arising from aortic arch, presented in 2.4% and 0.7%, respectively.

Conclusion : MDCT provides a reliable method to evaluate the anatomical variations of branches of aortic arch. Recognition of such variations is important in treatment planning of branches of aortic arch surgery and avoiding treatment complication.

Key Words : ● *Anatomical variation* ● *Branches of aortic arch* ● *Multidetector computed tomography*

Abstract no. 25

Prevalence of Metabolic Syndrome in Obstructive Sleep Apnea Syndrome Patients in Department of Otolaryngology Phramongkutklo Hospital

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Background : Obstructive sleep apnea syndrome (OSAS) is a common nocturnal disorder affecting particularly among middle-aged people and widely accepted the strong association of OSAS and cardiovascular risks. The metabolic syndrome represents several risk factors of metabolic origin that are through increase cardiovascular risk and have considerable relationship with OSAS.

Objective : To investigate the prevalence and association of the metabolic syndrome in obstructive sleep apnea syndrome (OSAS) patients in ENT setting.

Method : We studied 101 snorers of both sexes consecutively attending within snoring clinic. Aim was to evaluate the prevalence of the metabolic syndrome. Patients underwent a clinical, biochemical work up and performed polysomnography. Presence of obstructive sleep apnea syndrome was defined as apnea-hypopnea index (AHI) >5. The metabolic syndrome was defined by the criteria of the National Cholesterol Education Panel.

Results : A total of 101 subjects (70 men, 31 women) were studied, 30 had primary snoring, 37 mild, 17 moderate and 17 severe OSAS. OSA severity was positive associate with the metabolic syndrome and its components, including waist circumference, Blood pressure, fasting glucose and mean metabolic score $p < 0.005$.

Conclusion : Our finding show a high prevalence of the metabolic syndrome among snored patients referred to ENT setting because of suspected the metabolic syndrome and heavy snoring and suggest a strong bidirectional association between OSAS and the metabolic syndrome.

Key Words : ● *Obstructive sleep apnea syndrome* ● *Metabolic syndrome* ● *Waist circumference*
● *Polysomnography*

Abstract no. 26

Otologic Manifestations from Primary Blast Injury in Various Space Conditions among Military Personnel in the Southernmost, Thailand

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Objective : To report the prevalence of otologic manifestations from primary blast injury between the **open space, semi-open space, close space** among Military Personnel in the Southernmost, Thailand

Study Design : Observational descriptive cross-sectional study was designed for 76 Military Personnel whom injured from the bomb blast injury during the peace keeping operation, in Pattani, Yala and Narathiwat, Thailand, were referred to Phramongkutklao Hospital (PMK).

Material and Method : All of the patients were divided into three groups which represented the places and setting at the time of bomb blast attack, **Open Space** referred to an area without any barrier, **Semi-open Space** referred the room opened at least one side and **Close Space** referred the room enclosed with four-wall and ceiling. The otologic manifestations, tinnitus, bleeding, open wound and hearing loss were recorded at the time that patients were stable from life threatening conditions.

Results : All of the patients are male. The number of patients in the Open Space, Semi-open and Close Space were 47 (61.84%), 14 (18.42%) and 15 (19.74%) respectively. The most common type of the explosive was Improvised Explosive Devices(IED) 72 (94.74%). The average IED weight was approximate 11.42 kilograms. The distance from the explosive devices was 5.66 meters approximately. Timing from the place of bomb blast attack to PMK was 32.5 days (median).

The common otologic manifestations from 152 ears of 76 patients were tinnitus 48 ears (31.8%), tympanic membrane perforation 14 ears (9.21%), bleeding 13 ears (8.55%) and open wound 6 ears (3.95%). The audiogram showed Normal hearing in the Open Space, Semi-open Space and Close Space were 27.66%, 28.57% and 20.00% respectively. The Conductive hearing loss (CHL) in the Open Space, Semi-open Space and Close Space were 7.45%, 3.57% and 3.33% respectively. The Sensorineural hearing loss (SNHL) in the Open Space, Semi-open Space and Close Space were 62.77%, 67.86% and 73.33% respectively. The correlation between the weight of IED and distance from explosive devices were analyzed.

Conclusion : The most common otologic manifestation from primary blast injury among 76 military personnel were tinnitus and the majority of their audiograms showed high frequency SNHL (3-8 KHz). IED weight has correlation with severity of primary blast injury in Open, Semi-open and Close Space significantly.

Key Words : ● Blast injury ● Military personnel ● Southernmost

Abstract no. 27**Foreign Body in Ear, Nose, and Throat at Department of Otolaryngology, Phramongkutklao Hospital****Kitti Jiraanankul and Ussana Promyothin***Department of Otolaryngology, Phramongkutklao Hospital*

Background : Foreign bodies (FB) in the ear, nose and throat, is a common condition in emergency room that referred to otolaryngologist. However, the natural history of the foreign bodies regarding the common sites and types among different ages had never been studied before.

Objective : To study the prevalence including sign and symptoms of foreign body in the trachea, ear, throat and upper esophagus at different age groups at Otolaryngology Department, Phramongkutklao Hospital.

Study Setting : Otolaryngology Department, Phramongkutklao Hospital.

Methods : Retrospective review and prospective study of the patients with FB obstruction in ENT from October 2007 to January 2011

Result : Data from 270 patients. There are 153 men, 117 women, aged 1-86 years, mean age 46 years. The overall most common site of the foreign body is oropharynx site, followed by the ear, esophagus and nose respectively. Dividing by age, the most common site of FB obstruction in children (age 1-6 years) was ears (66.67%) followed by noses (33.33%). Teenage, adult and elderly had the same most common site that was oropharynx. According to the types of FB, in children, various types of FB were found that were foam, plastic, seeds, etc. In teenage, adult and elderly, there were the same most common type of FB that were fishbone. Especially in elderly, drug peel and dentures in upper esophagus were found as common FB. Moreover, we also found migratory FB (fishbone) that migrate from oropharynx to submandibular area. Another case, who presented with mild irritative cough and normal respiration was found to have multiple fish vertebrae in subglottic area.

Conclusion : Different sites and types of foreign body were identified at different age groups. Atypical manifestation of FB obstruction should be aware in aerodigestive tract foreign body.

Key Words : ● *Foreign body*

Abstract no. 28**The Study of Prevalence of Allergic Rhinitis in Snoring Patient
in Phramongkutklao Hospital****Thippa Toprem and Prasit Mahakit***Department of Otolaryngology , Phramongkutklao Hospital*

Background : Snoring can cause psychological, social damage to sufferers and increase in cardiovascular disease and neurocognitive difficulties. Allergic rhinitis significant risk factor for snoring, because allergic rhinitis leads to nasal obstruction and increase upper airway resistance, sleep-related upper airway obstruction could result.

Objective : To study of prevalence of allergic rhinitis in snoring patient in Phramongkutklao Hospital.

Methodology : Snoring patient with age over 18 years underwent a history and physical examination. Subjective data were collected by the questionnaire, which classified patients into 2 groups of allergic rhinitis and non allergic rhinitis. The allergic rhinitis group has been tested for skin prick test, then the data to determine the prevalence and the correlation of allergic rhinitis in snoring patient.

Results : The prevalence of allergic rhinitis in snoring patient is 36%. This study shown that Epworth Sleepiness Scale and allergic rhinitis correlate significantly in statistic (P-value = 0.019)

Conclusion : The prevalence of allergic rhinitis in snoring patient is 36%. There was a significant correlation between allergic rhinitis and daytime sleepiness.

Key Words : ● *Snoring* ● *Allergic rhinitis*

Abstract no. 29**Effect of Acupuncture on Labor Pain in Nulliparous Women
in Phramongkutklao Hospital****Thotsapon Trakulmungskichkarn and Chutawadi Vuthiwong***Department of Obstetrics and Gynecology, Phramongkutklao Hospital*

Background : Acupuncture is an ancient Chinese medicine. It has long been used as complementary method for pain management.

Objective : To assess the effects of acupuncture on labor pain and duration of labor in nulliparous women during labor.

Material and Methods : Sixty healthy nulliparous women in active phase of labor were randomized into the study and control group. The study group received acupuncture. Visual analogue scale was used to assess severity of pain before acupuncture then 30, 60 and 120 minutes after acupuncture.

Result : Without pethidine administration, 30 minutes after acupuncture, pain scores assessed by visual analogue scale in the study group were significantly lower than the control group (5.52 ± 0.35 vs 6.06 ± 0.59). No difference in duration of active phase, amount of oxytocin and pethidine administration in both groups. No adverse effects were detected in acupuncture group.

Conclusion : Acupuncture could reduce labor pain in nulliparous women during active phase of labor and no adverse effects were noted.

Key Words : ● *Acupuncture* ● *Active phase* ● *Labor pain* ● *Duration of labor* ● *Oxytocin*

Abstract no. 30

Post Cesarean Section Complications in Phramongkutklo Hospital : A 5-year Review (2005-2010)

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Objective : To determine the rate of complications which accompany cesarean sections at Phramongkutklo Hospital.

Material and Methods : All women who underwent cesarean section from 1st October 2005 to 30th September 2010 were retrospective reviewed. Information was collected from maternity records regarding the operation and its complications if they occurred, during or following the operation.

Results : During this period 3,622 women were delivered by cesarean section at Phramongkutklo Hospital. The overall maternal complications rate was 8.5% (308 cases). The most common complications were blood loss $\geq 1,000$ mL 6.98% (253 cases), intra-operative hypotension 4.30% (154 cases), respiratory tract infection 0.49% (18 cases), urinary tract infection 0.44% (16 cases), puerperal infection 0.36% (13 cases), wound infection 0.14% (5 cases) and tear urinary bladder 0.08% (3 cases). On multiple logistic regression analysis, only urinary tract infection that had not been treated during antepartum visit was significant complication (OR = 6.18, 95% CI = 3.03-12.59, p-value < 0.001).

Conclusion : Complications following cesarean section are uncommon. Post cesarean section complications rate at Phramongkutklo Hospital during 5 years was 8.5%. The most common complications were postpartum hemorrhage and intra-operative hypotension. Early detection and appropriated treatment of cesarean section complications can prevent maternal morbidity and mortality.

Key Words : ● *Cesarean section* ● *Post cesarean section complications*

Abstract no. 31**The Effect of Preoperative Oral Etoricoxib to Reduce Postoperative Pain in Patients after Abdominal Hysterectomy at Phramongkutklao Hospital****Raviwan Kamman and Krisada Srithanaphakarangkul***Departments of Obstetrics and Gynecology, PhramongkutklaoHospital*

Objective : The study was conducted to evaluate the analgesic efficacy of Etoricoxib to reduce postoperative pain and morphine consumption.

Material and Method : A double-blind, randomized controlled trial that included 24 women who underwent total abdominal hysterectomy (undergeneral anesthesia) was conducted at Phramongkutklao Hospital. The patients were allocated randomly to receive orally either 120 mg of Etoricoxib group (N=12) or placebo (N=12) before anesthetic induction. Intravenous morphine was given for patient controlled analgesia device. Morphine consumption, pain scores, and side effects were recorded at 2, 4, 8, and 24 hour after surgery. Patients' global evaluation of study medication was assessed at the end of the present study.

Results : The pain score at 24 hours after surgery significantly less in Etoricoxib group than in placebo group and the morphine consumption was also significantly less in Etoricoxib group at either 2, 4, 8, or 24 hour.

Conclusion : Single dose Etoricoxib 120 mg given orally before total abdominal hysterectomy could significantly reduce pain score at 24-hour post surgery and also decrease morphine consumption.

Key Words : ● *Total abdominal hysterectomy* ● *Etoricoxib* ● *Patient controlled analgesia*

Abstract no. 32**Association between Bacterial Vaginosis in Pregnant Women and Preterm Delivery at Phramongkutklo Hospital****Thongplang H and Punpuckdeekoon P¹**

Department of Obstetrics and Gynecology, Phramongkutklo Hospital; ¹Maternal-Fetal Medicine Unit, Obstetrics and Gynecology, Phramongkutklo Hospital.

Objective : To explore an association between bacterial vaginosis and preterm delivery.

Material and Methods : A prospective study was conducted between November 2010 and July 2011. During first antenatal visit, vaginal examination and wet smear was performed in pregnant women who voluntarily participated in our study. Study group comprised those who were diagnosed bacterial vaginosis according to Amsel's criteria and would be treated by metronidazole or clindamycin while controlled group included women without bacterial vaginosis. Demographic data including age, obstetrical, sexual and social history were recorded, then all participants would be followed until delivery. Route of delivery, newborn birthweight, and perinatal complications would also be recorded. A proportion of preterm delivery in the women affected with bacterial vaginosis would be compared with those in controlled group.

Result : A total of 206 pregnant women were enrolled. Among 103 participants affected with bacterial vaginosis, 26 women (25.2%) delivered prematurely. Whereas 8 out of 103 (7.8%) in controlled group had preterm delivery which was statistically significant different (Relative risk = 3.25, p = 0.001).

Conclusion : There was an association between bacterial vaginosis and preterm delivery.

Key Words : ● *Bacterial vaginosis* ● *Preterm delivery*

Abstract no. 33**Prevalence of Premenstrual Syndrome and Effects on Quality of Life in Medical Personnel at Phramongkutklao Hospital****Arweerat Jureemas and Pongrak Boonyanurak***Department of Obstetrics and Gynecology, Phramongkutklao Hospital*

Objective : The objective of this research is to investigate prevalence of premenstrual syndrome (PMS) and the effect of PMS on quality of life in medical personnel at Phramongkutklao Hospital.

Material and Method : This research is a cross sectional study. The research was performed on 330 female medical personnel who work at Phramongkutklao Hospital and accepted to take part in the research. The participants were requested to complete the questionnaire consists of descriptive data, premenstrual symptoms and quality of life during 7-10 days before menstruation begin. Data were analyzed using mean, standard deviation, percentage distribution and student's t test.

Findings : PMS was detected in 35.75% of the medical personnel. The most frequent of psychological symptoms are irritability, angry outburst. The most somatic symptoms are breast tenderness and swelling of extremities. When the comparative of PMS with quality of life was investigate, we found that overall quality of life in PMS group was lower ($p < 0.001$). PMS group had significant lower score in physical, psychological and environmental dimension but no significant in social relations.

Conclusion : The prevalence of PMS is high in medical personnel and this adversely effects the quality of life. It was indicated that affect on health service and should be instructive and treatment in PMS.

Key Words : ● *Medical personnel* ● *Premenstrual syndrome* ● *Quality of life*

Abstract no. 34

Effectiveness of Probiotics (*Lactobacillus Acidophilus/Bifidobacterium Bifidum*) in Treating Acute Childhood Diarrhea at Phramongkutkiao Hospital

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Background : Acute childhood diarrhea remains a major health problem worldwide. Although rehydration therapy is the standard management, usage of specific probiotic strains has been recommended as an adjunctive treatment.

Objectives : To determine the effectiveness of a probiotic formulation, *Lactobacillus acidophilus* and *Bifidobacterium bifidum*, in treating acute childhood diarrhea.

Design : Randomized double blind controlled trial

Material and Method : Children aged 3-71 months with acute diarrhea admitted to Phramongkutkiao Hospital were enrolled into the study. After obtaining informed consents, they were randomly allocated into two groups: a study group receiving oral probiotics (*Lactobacillus acidophilus/Bifidobacterium bifidum*) and a control group receiving placebo. Stool counts after treatment, duration of illness and hospitalization length were evaluated.

Results : One hundred and nine infants were enrolled into the study: 56 in the study group and 53 in the control group. There was no difference in the patients' characteristics between the groups. Duration of illness and stool counts of the study group (5.09 ± 2.03 days and 12.95 ± 10.30 times) were not different from those of the control group (5.47 ± 2.08 days and 13.36 ± 14.27 times) at p value of 0.34 and 0.86 respectively. There was no statistical difference in hospitalization length between the study and the control groups either (2.89 ± 1.22 VS 3.26 ± 1.48 days respectively, p value of 0.16).

Conclusion : Although a tendency of shorter duration of illness and hospitalization length was noted, there was no statistical difference in these parameters between the probiotic formulation therapy compared to standard rehydration therapy.

Key Words : ● *Probioties* ● *Diarrhea*

Abstract no. 35**Comparison between Pre-operative Administration of Cilostazol and Conventional in Survival of Dorsal Rat Flap : Randomized Controlled Trial****Janjira Boonpipattanakul and Chairat Burusapat***Division of Plastic and Reconstructive Surgery, Department of Surgery, Phramongkutklo Hospital*

Introduction : Flap necrosis remains a significant problem in plastic and reconstructive surgery. Insufficient arterial blood flow is the main cause of flap necrosis. Cilostazol is an inhibitor of phosphodiesterase and increases cyclic AMP (cAMP) in platelets and also raises the vascular smooth muscle cell cAMP level causing vasodilation. Cilostazol has been used for chronic ischemic condition especially in peripheral vascular disease. Therefore, it is expected to increase local blood flow in the skin. Objective of this study is to comparison the efficacy between pre-operative administration of cilostazol and conventional in survival of random cutaneous flap in rat model.

Method : Twenty-six-week-old male Sprague-Dawley rats were randomly assigned to two groups of 15 rats each: those with normal diet (control group) and those with a cilostazol (40 mg/kg/day) supplemented diet (Cilostazol group) for 7 day before surgery. A caudally based rectangular dorsal random cutaneous 2X8 cm² flap was elevated. Silastic sheet was placed under flap to prevent revascularized from bed then flap was returned to its bed. Photograph for computer-aided surface area were taken and measured in each group. The extent of distal flap necrosis was expressed as a percentage of the total flap area at post operative day 1,3,5 and 7. The surface area of flap survival was compared between control group and cilostazol group.

Result : The means of flap survival in post operative day 1 and day3 in cilostazol group were 94.26% and 80.3% and in control group were 91.17% and 75.41%, respectively. There were no statistically significant between each groups in post operative day 1 and day3. The means area of flap survival in cilostazol group were 52.69% and 49.76% and higher than the control group (42.9%,40.08%) in post operative day 5 and 7 with statistically significant.

Conclusion : Pre-operative administration of cilostazol has statistically significant increased flap survival of dorsal rat flap in post operative day 5 and 7.

Key Words : ● *Cilostazol* ● *Survival of dorsal rat flap*

บทคัดย่อที่ 36

ความชุกของโรคเครียดเฉียบพลันและผลกระทบทางจิตใจหลังเหตุการณ์วิกฤตในกำลังพลทหารที่ได้รับบาดเจ็บจากเหตุการณ์ความรุนแรง

อภิชาติ เรณูวัฒนานนท์ อิศรา รัชกุล และ เจษฎา ยิ่งวิวัฒนพงษ์

กองจิตเวชและประสาทวิทยา โรงพยาบาลพระมงกุฎเกล้า

บทนำ : จากความขัดแย้งทางความคิดเห็นด้านการเมืองที่นำมาซึ่งเหตุการณ์ความรุนแรงช่วงเดือนเมษายน 2553 เหตุการณ์ดังกล่าวนอกจากจะก่อให้เกิดความเสียหายด้านร่างกายและทรัพย์สินแล้ว ยังมีผลกระทบต่อจิตใจของผู้เข้าร่วมเหตุการณ์อย่างเลี่ยงไม่ได้โดยอาจพบโรคเครียดเฉียบพลันได้ในระยะแรก จากการตระหนักในปัญหาด้านสุขภาพจิตที่เกิดขึ้น จึงควรมีการประเมินด้านจิตใจในกำลังพลทหารที่ได้รับมอบหมายให้ปฏิบัติภารกิจในเหตุการณ์ดังกล่าว เพื่อการรักษาที่เหมาะสมและป้องกันโรคทางจิตเวชที่เกิดขึ้น

วัตถุประสงค์ : เพื่อศึกษาความชุกของโรคเครียดเฉียบพลันและผลกระทบทางจิตใจหลังเหตุการณ์วิกฤตในกำลังพลทหารที่ได้รับบาดเจ็บจากเหตุการณ์ความรุนแรงเมื่อวันที่ 10 เมษายน 2553

วิธีการศึกษา : รวบรวมเวชระเบียนในกำลังพลทหารที่ได้รับบาดเจ็บจากเหตุการณ์วิกฤต เมื่อวันที่ 10 เมษายน 2553 และได้รับการนอนรักษาตัวในโรงพยาบาลพระมงกุฎเกล้า จำนวน 100 นาย กำลังพลทหารที่ได้รับบาดเจ็บได้รับการเข้าช่วยเหลือด้านจิตใจ และปฐมพยาบาลทางจิตใจเบื้องต้น พร้อมทำการประเมินโรคเครียดเฉียบพลันหลังเหตุการณ์วิกฤต โดยใช้เกณฑ์การวินิจฉัย DSM IV -TR และ ใช้แบบประเมินผลกระทบทางจิตใจหลังเกิดเหตุการณ์วิกฤต - 18 (PISECS-18) เพื่อประเมินผลทางจิตใจ

ผลการศึกษา : กำลังพลทหารที่ได้รับบาดเจ็บจากเหตุการณ์ความรุนแรงเมื่อวันที่ 10 เมษายน 2553 ที่ได้รับการนอนรักษาตัวในโรงพยาบาลพระมงกุฎเกล้า จำนวน 100 ราย พบว่ามีทหารที่ได้รับความทุกข์ทรมานทางจิตใจมาก ร้อยละ 2 ทหารที่ได้รับความทุกข์ทรมานทางจิตใจเล็กน้อย ร้อยละ 8 ไม่พบอุบัติการณ์ของโรคเครียดเฉียบพลัน แต่พบผู้มีอาการที่ไม่ครบเกณฑ์วินิจฉัยโรคเครียดเฉียบพลันจำนวน 5 ราย ซึ่งเป็นผู้มีกลุ่มอาการ 3 อย่างคือ Re-experience , Avoidance และ Anxiety ขาดกลุ่มอาการ Dissociation และยังพบว่าปัจจัยส่วนบุคคลไม่มีความสัมพันธ์กับผลกระทบทางจิตใจหลังเหตุการณ์วิกฤตในทหารที่ได้รับบาดเจ็บจากเหตุการณ์ความรุนแรง อย่างมีนัยสำคัญทางสถิติ

สรุป : ถึงแม้ในการศึกษาจะไม่พบโรคเครียดเฉียบพลันและพบผู้มีความทุกข์ทรมานทางจิตใจมากร้อยละ 2 แต่ควรมีการประเมินโรคเครียดเฉียบพลันและความทุกข์ทรมานทางจิตใจภายหลังเหตุการณ์รุนแรง เพื่อค้นหาผู้มีความเสี่ยงต่อการเกิดปัญหาด้านสุขภาพจิตเพื่อให้การรักษาในระยะแรก พร้อมทั้งติดตามและป้องกันปัญหาด้านสุขภาพจิตต่อไป

Key Words : ● เหตุการณ์ความรุนแรง ● โรคเครียดเฉียบพลัน ● ผลกระทบทางจิตใจหลังเหตุการณ์วิกฤต

Abstract no. 37**The Study of the Footprint of Anterior Cruciate Ligament
in Thai Population : A Human Cadaveric Study****Auttaphon Arkasihayuth, Nattha Kulkamthorn, Korakot Charakorn, Manop Chaimati****Piyanee Sriya and Niwat Reeboonlap***Department of Anatomy, Phramongkutkloa College of Medicine, and Department of Orthopaedics, Phramongkutkloa Hospital*

Purpose : Identification of the anterior cruciate ligament (ACL) footprint is critical for anatomical ACL reconstruction. The osseous landmark of the ACL footprint is one of the methods that can be used to determine the ACL insertion site. The size of ACL footprint on femur and tibia also is important for surgical decision. The purpose of this study represents the existing of osseous land mark and size of ACL footprint in Thai people.

Study Designs : Cadaveric Study.

Methods : Thirty-eight paired and 1 nonpaired of cadaveric knees (77 knees). All cadaveric knees of Phramongkutkloa College of Medicine were dissected to identify bony landmark of ACL at both tibia and femur attachment, and to detect Resident's ridge and Lateral bifurcate ridge. The size of ACL footprint on tibia and femur were measured and recorded by length and width.

Results : The study found Resident's ridge, 75/77 knees (97.40%) and Lateral bifurcate ridge (bony landmark between anteromedial and posterolateral bundle), 50/77 knees (64.94%), *In male*, the size of ACL at right femur attachment, width 10.03 ± 1.10 mm. length 12.77 ± 1.27 mm. At right tibia, width 11.49 ± 1.30 mm. length 17.16 ± 1.00 mm. At left femur, width 9.94 ± 1.60 mm. length 12.59 ± 1.69 mm. At left tibia, width 11.14 ± 1.52 mm. length 16.52 ± 1.07 mm. *In female*, the size of ACL at right femur attachment, width 8.63 ± 0.69 mm. length 10.82 ± 0.95 mm. At right tibia, width 10.11 ± 0.62 mm. length 12.60 ± 1.21 mm. At left femur, width 8.59 ± 0.87 mm. length 10.54 ± 1.26 mm. At left tibia, width 10.09 ± 1.19 mm. length 12.37 ± 0.98 mm.

Conclusions : The study of ACL footprint in Thai people shows the Lateral bifurcate ridge represent 64.94%, Resident's ridge as 97.40%. The average size of ACL tibial footprint among Thai female are smaller than 14 mm. So the single anatomical ACL reconstruction may be preferred than double-bundle technique. In the other hand, the average size of ACL insertion in Thai male is greater 14 mm, so that double bundle technique could be preferred. These findings may assist the orthopedist to identify ACL footprint in Thai population even more accurately.

Key Words : ● Anterior cruciate ligament reconstruction ● Resident's ridge ● Lateral bifurcate ridge
● Bony landmarks

Abstract no. 38

Musculoskeletal Injuries in Thai Military Personnel Who Injured with Combat Casualties in Bangkok Conflicts on April 10, 2010

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Background : On April 10, 2010, in Bangkok has the political conflicts in which many Thai military personnel were injured in riot situation, referred to as the combat casualties, total 751 Thai military personnel who transported to Phramongkutklao hospital.

Objective : To study the musculoskeletal injury and orthopedic management in combat casualties in Bangkok conflicts on April 10, 2010 for maintaining good hospital records during political conflicts can provide medical personnel to rapidly adjust treatment strategies and improve outcomes.

Methodology : Retrospective review the medical records, film X-Ray and forensic report of total 751 Thai military personnel who injured from The Political conflicts in Bangkok April 10,2010 whom were transported to admission and OPD case at Phramongkutklao Hospital.

Results : Total **756** Thai military personnel were enrolled in this study, 285 victims were require admit in hospital and 466 victims were treated as OPD case, 4 victims were Killed in Action (KIA,%KIA = 1.38), 1 victim was Died of Wounds (DOW,%DOW = 1.76), the three most mechanism of wounding: physical assaultation (47.61%), Blast injury (27.78%), tear gas (21.42%), site of primary injury: Soft tissue (42%), Extremity (36%), Head (8%), Abdomen (5%), Chest (3%), Face (2%), Neck (1%), Multiple (3%)

Conclusion : Blast injury is the most mechanism to injured Thai military personnel to mortality and morbidity, open fracture from blast injuries is the most of operative procedure in orthopaedic surgery. If Thai people have unity the same situation is never gone.

Key Words : ● *Combat casualty* ● *Military personnel* ● *Musculoskeletal injuries* ● *Blast injuries*
● *Fire arm injury*

Abstract no. 39

Correlation between Grading of Trigger Finger and Postoperative Range of Motion

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Back ground : Trigger finger is very common problem seen by orthopedic surgeon. Non-operative treatment is the first line modality and surgical release is indicated for failed nonoperative treatment or severe cases with flexion deformity. There are no study in the literature reporting different grading and clinical outcome. The purpose of this study was to found correlation between grading of trigger finger and postoperative range of motion

Material and Method : Ninty-five trigger fingers and thumb which failed nonoperative treatment were classified grade based on Green classification and measured range of motion in each patient preoperative. Open A1 pulley release was performed by hand surgeon and postoperative range of motion were measured at day 1, week 2, 6 and 3, 6 months postoperative. Different preoperative and postoperative range of motion was calculated and compared between different grading.

Result : All 95 trigger digits and thumb which performed open surgery. Based on classification by Green; Grade II 44.2%, III 29.5%, IV 26.3%. Mean different preoperative and postoperative range of motion were significantly between grade II and IV however not significantly between other grading. Mean different preoperative and postoperative visual analog scale were not significantly between different grading. All complication at 6 months postoperative were stiffness 9.5% and no serious complication were observed.

Conclusion : Mean different preoperative and postoperative range of motion are significantly between grade II and IV and result of open A1 pulley release is highly effective with low complication rate.

Key Words : ● *Trigger finger* ● *Range of motion*

Abstract no. 40

The Anatomy of the Sensory Nerve Supply in Anterolateral Thigh Flap

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Back ground : The sensate anterolateral thigh flap was widely used in clinical practice but the neural anatomy of this flap had not been extensive study before.

Objective : To determine the anatomic location of the sensory nerves supplying the anterolateral thigh flap (ALTF) in relation with the surface landmark

Material and Method : Twenty-eight dissections were carried out in 14 embalmed cadavers. The surface landmarks were established. We drew a longitudinal line using the line from anterior superior iliac spine (ASIS) to superolateral border of the patella. From the midpoint of this line, two circular lines with a radius of 5 cm and 10 cm were drawn. Courses of the lateral cutaneous femoral nerve (LFCN), the superior perforator nerve (SPN), the median perforator nerve (MPN) were identified and recorded in position of x,y.

Result : Sixty-four point two nine percent of LFCN divided into anterior and posterior branches before entering a 10 cm circle and 100% before entering a 5 cm circle Range of Main LFCN entering 10 cm circle is from (-2)-1 lateral to the longitudinal line (mean -0.38 SD 0.946). Anterior LFCN is from (-1)-2.4 (mean 0.72 SD 0.95). Posterior LFCN is from (-5.2)-0.5 (mean -0.38 SD 1.35). Range of anterior LFCN entering 5 cm circle is from (-2.2)-2.8 (mean 0.37 SD 0.98) and posterior LFCN is from (-3)-1 (mean -1.58 SD1.88). The SPN and MPN penetrate the muscle to supply superomedial portion of the flap but do not enter 5 cm circle.

Conclusion : The anatomic location of main and anterior LFCN is consistent with the surface landmark proximal to midpoint of the thigh whereas the posterior LFCN, SPN and MPN are unpredictable. This study provides information for clinical utility in facilitating decision making and planning sensate ALTF harvest.

Key Words : ● *Thigh flap*

Abstract no. 41

Effectiveness of Epidural Triamcinolone Compare Methylprednisolone Injection in Patient with Lumbar Spinal Stenosis

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Background : Lumbar spinal stenosis is a degenerative spinal disease that the patients present with back pain, leg pain, neurogenic claudication and neurological deficit. Non-operative treatment such as medication, rehabilitation and epidural steroid injection were demonstrated improve patient symptoms, quality of life and lowering rate of operation. Many corticosteroids have been use for epidural injection and there are no comparative effectiveness data in these patients.

Objective : To study the effectiveness of epidural triamcinolone compare methylprednisolone injection in patient with lumbar spinal stenosis.

Methodology : Randomize control study was conducted, using pain visual analogue score questionnaire in lumbar spinal stenosis patients at Department of orthopaedics, Phramongkutklao Hospital during December 1, 2010-June 30, 2011. The questionnaire was performed and collected before epidural steroids injection, 2 weeks after injection and 6 weeks after injection.

Result : Thirty - one lumbar spinal stenosis patients treated with epidural steroid injection were enrolled. There were 15 lumbar spinal stenosis patients treated with epidural triamcinolone injection and 16 with epidural methylprednisolone injection. The result show that visual analogue score (VAS) in both groups was improved after 2 and 6 weeks of injection when compared with pre-injection (pre-injection VAS of triamcinolone group = 7.14 ± 1.31 , 2 weeks after injection = 4.22 ± 1.19 , 6 weeks after injection = 3.78 ± 1.08 and pre-injection VAS of methylprednisolone group = 6.62 ± 1.14 (4.7-10), 2 weeks after injection = 4.76 ± 1.14 , 6 weeks after injection = 3.94 ± 1.06 respectively), with significant difference ($p < 0.005$) in both groups. There was significant difference of VAS when compare triamcinolone and methylprednisolone groups at 2 weeks after injection ($p = 0.005$) but at 6 weeks after injection no significant difference ($p = 0.085$). There were no significant difference in other variable such as age and gender.

Conclusion : Both epidural triamcinolone and methylprednisolone are effectiveness for treatment patient with lumbar spinal stenosis in term of pain reduction. Triamcinolone was better pain relieve at short term (< 6 weeks) after injection. In mid term (6 weeks - 3 months) after injection both triamcinolone and methylprednisolone are equally effectiveness.

Key Words : ● Lumbar spinal stenosis ● Methylprednisolone ● Epidural triameinolone

Abstract no. 42

Correlation between Knee Axis and Adaptation of Medial Arch of Foot after Total Knee Arthroplasty

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Background : The notice of foot & ankle and arthroplasty expert in many patients treated with TKA have medial arch of foot pain. Because of the load increasing in lateral side of foot in varus knee, if the changing in knee axis to valgus in TKA it may change the load to medial side of foot and affect changing the medial arch angle of foot. To our knowledge, this is 1st report the correlation between the difference of knee axis in TKA with the changing in medial arch angle after TKA.

Material and Method : A prospective study on 65 cases was performed to evaluate the correlation between knee axis and adaptation of medial arch of foot after TKA. The patients were sent to x-ray foot weight bearing lateral preoperatively, 3 and 6 months postoperatively. The parameters were measured the correlation of changing knee axis (Femoro-tibial angle) and the changing in medial arch angle of foot (Talar-1stMetatarsal angle, Calcaneal pitch angle) after TKA.

Result : The correlation of changing Femoro-tibial angle after TKA and the changing in Talar-1stmetatarsal angle at postoperative 3 months is low correlation ($R = 0.20$), and at postoperative 6 months is same low correlation ($R = 0.36$).

The correlation of changing Femoro-tibial angle after TKA and the changing in calcaneal pitch angle at postoperative 3 months is low correlation ($R = -0.24$) and at postoperative 6 months is same low correlation ($R = 0.26$).

Conclusion : Because of the short term (6 months) follow up in postoperative TKA patients. The patients are not still full weight. Bearing. The result show low correlation caused by the weight load to medial side of foot may insufficient to change the medial arch of foot. So this study should follow up in the long term. The correlation may increasing significant.

Key Words : ● *Knee axis* ● *Total knee arthroplasty*

Abstract no. 43**Patellar Tendon Length after Arthroscopic Anterior Cruciate Ligament Reconstruction with Patellar Tendon Graft****Chalat Naksongsak and Niwat Reeboonlap***Department of Orthopaedics, Phramongkutklao Hospital*

Background : Arthroscopic anterior cruciate ligament (ACL) reconstruction with patellar tendon graft has been considered to be the gold standard treatment of anterior cruciate ligament injury. Many morbidities occurred after this graft was harvested, such as the patellar tendon length change and anterior knee pain, but there was the differences of the results have been reported.

Objective : To study the patellar tendon length change after arthroscopic ACL reconstruction with patellar tendon graft.

Method : Descriptive study was conducted. Patients who were diagnosed ACL injury and underwent arthroscopic ACL reconstruction with patellar tendon graft were included. All had undergone an identical operative techniques, by the same surgeon, and followed the same postoperative rehabilitation program. All patients had standardized preoperative and postoperative lateral knee radiographs. The patellar tendon length, patellar height, Insall-Salvati ratio and Tegner Lysholm knee score were measured by the same person for all subjects.

Results : In a series of 22 patients, the length of the patellar tendon lengthened by an average of 0.95 mm (6 mm shortening to 5 mm lengthening) or 1.82% and not statistically significant ($P = 0.101$). The Insall-Salvati ratio increased by 2.75% (16.32% shortening to 18.6% lengthening) which was also not statistically significant ($P = 0.218$). The Tegner Lysholm knee score improved average 20.36 (5 to 45), statistically significant ($P < 0.05$). And the amount of the Insall-Salvati ratio change was not related to Lysholm score ($P = 0.571$).

Conclusion : This study indicated that no significant change of patellar tendon length after arthroscopic ACL reconstruction with patellar tendon graft and no correlations with postoperative Insall-Salvati ratio and Tegner Lysholm knee score. And the clinical results was improved in all patients.

Key Words : ● *Arthroscopic anterior cruciate ligament reconstruction* ● *Patellar tendon graft*
● *Patellar tendon length* ● *Insall-Salvati ratio* ● *Tegner Lysholm knee score*

Abstract no. 44

The New Technique for Correcting Premature Locking Knot

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Background : Nowadays, tearing of tendons from bone due to sport injury or degenerative change are diagnosed more frequently. There are several treatments of choice such as transosseous suture technique, using anchor suture with No.2 Fiberwire[®] which is a suture material, reconstruction graft, etc. When surgeons tie a knot, premature locking knot can happen. It leads to unsecured loop which affect the tendon to bone healing. Applying 3RHAPs for correcting this problem is the new technique that surgeons do not need to cut or make a new suture.

Objective : To compare ultimate tensile load between the new technique (applied 3RHAPs) and 5-throw square knot (gold standard).

Methodology : A controlled laboratory study 46 samples was performed. The No.2 Fiberwire[®] was used as a suture material for ultimate tensile test with Instron material testing system. The first half group with 5-throw square knot was compared to the latter group which corrected by 3RHAPs from unsecured loop in 5-throw square knot.

Results : After testing both groups, there was no statistically significant difference for ultimate tensile load (309.01+ 18.53N v 311.56 + 24.56N, P = 0.689). Mode of failure for all specimens was suture breakage.

Conclusion : The new technique by applying 3RHAPs is as strong as 5-throw square knot which is the gold standard for open tendon to bone repair technique. This new technique can decrease operative time from resuturing, cost from using a new anchor suture and morbidity if there is limited space for a new anchor suture.

Key Words : ● *Premature locking knot* ● *Three Reverse Half-hitch Alternating Post (3RAHP)*
● *5-throw square knot* ● *Ultimate tensile load, Fiberwire[®]*

Abstract no. 45**Randomized Controlled Trial of Treatment in Adult Acquired Flatfoot with Custom-made Semirigid Insole Compare with UCBL Orthosis****Tanawat Fongsri and Nusorn Chaiphrom***Department of Anatomy, Phramongkutklao College of Medicine, and Department of Orthopaedics, Phramongkutklao Hospital*

Background : Posterior tibial tendon dysfunction (PTTD) is the most common cause of adult-acquired flatfoot. Stage II PTTD is usually treated with orthoses which there is evidence to support an improvement in clinical outcome, but it is lack of control group and non-validated outcome measurement. The purpose of this study was to compare clinical outcomes in patients using UCBL orthosis and patients using semirigid insole.

Material and Method : Adult-acquired flatfoot patients who were diagnosed with PTTD stage II were evaluated foot and ankle condition by using the American Orthopaedic Foot and Ankle Society (AOFAS) Hindfoot score. Subjects were randomized for treated with UCBL or semirigid insole. After six-month period of using orthosis, the clinical outcome were measured by AOFAS Hindfoot score. Unpaired *t*-test was used to compare the difference of increased score in both groups.

Result : Seventeen patients (sixteen women and one man) who had PTTD stage II were evaluated. Nine patients were treated with UCBL, and eight patients were treated with semirigid insole. In UCBL groups, the average AOFAS hindfoot score before and after treatment were 79.38 and 87.25 respectively. In semirigid insole groups, the average AOFAS hindfoot score before and after treatment were 68.56 and 77.56 respectively. At 95% confidence, we concluded that no difference of increased score in both groups. (*t*-test 0.407, *p* > 0.05, CI -4.7 - 7.0)

Conclusion : Various types of orthoses were recommended for conservative treatment in early stage of PTTD including foot orthoses, braces and ankle-foot orthoses. UCBL is rigid orthosis which has benefit for preventing deformity. But it has low compliance, high cost and complicated production process. Semirigid insole may be used instead of UCBL because of no difference in outcome, low cost and low technical demand.

Key Words : ● UCBL orthosis

Abstract no. 46

Accuracy of Harris Mat Footprint for Diagnosis of Flat Foot Compared with Standing Radiography

Yanin Plumarom and Nusorn Chaiphrom

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Background : There are three common methods to assess a flatfoot: physical examination, radiographs, and footprint. Some findings support the idea that the talar-first metatarsal angle is an accurate radiograph identifier of patient with flat foot and most using measurement in foot & ankle specialist. Staheli index is foot print method measurement that reliable foot print measurement. To day the accuracy of Staheli index from foot print compared with standing radiograph is still not shown.

Material and Method : Weight bearing lateral radiographs were obtained on 157 patient (314 feet). Radiographs were examined for talar-first metatarsal angle all patient. Harris mat imprints were obtained on each foot and measured for Staheli index.

Result : ROC curve was performed from Staheli index and weight bearing lateral radiographs (talar-first metatarsal angle). Area under ROC curve reveal value 0.7882. The staheli index from foot print cutoff value at 0.8 was reveal sensitivity 67.5% and specificity 81% PPV=67% NPV=81.4% accuracy 76%. Intraobserver reliability of Staheli index from area under ROC curve reveal $r = 0.3283$, Inter observer reliability of Staheli index from area under ROC curve reveal $r = 0.3379$. From Likelihood Ratio Nomogram, In cases suspected diagnosis of flatfoot reveal post-test probability 78%

Conclusion : These finding validates the use of staheli index from Harris mat foot print as an effective method for determine flat foot deformity that compared with standing radiographs (talar-first metatarsal angle). Staheli index easy to perform, good accuracy, good interobserver and intraobserver reliability.

Key Words : ● *Harris mat footprint*

Abstract no. 47

Computer Learning Evaluation with Pre-test and Post -test in Preclinical Education

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Background : Pre-test and post-test have been popularly managed in various designs in Medical Education. Such tests for basic computer were performed digitally during 2004 to 2007 at Phramongkutklao College of Medicine, Thailand.

Objective : To present the digital pre - tests and post - tests success via intranet as a tool in computer learning evaluation and course assessment for preclinical education.

Methods : There were 3 test contents of multiple choice questions taken by the medical cadets : content I in 2004 created by using the Toolbook II Instructor program, content II in 2005 and III in 2006 and 2007 operated by the Moodle program. The content II and III were accessed via intranet. The outcome data were analysed with descriptive statistics and the two - sample Z test for comparison.

Results : Each year studied revealed significant higher scores in post - test than in pre - test at $p < 0.05$. Both pre - test and post - test average scores in 2007 were significantly higher than in 2006 at $p < 0.05$. The largest percentage number of students were yearly in Fair group for pre - test and in Good group for post - test.

Conclusions : These pre - tests and post - tests are satisfied to be used via intranet as an effective tool for the computer learning evaluation and a key concept in assessment methodology of the course. Simple analysis techniques, evaluation software implementation via intranet with automatically checking and paperless score saving are benefit of this study.

Key Words : ● *Pre-tests and post-tests* ● *Assessment methodology* ● *Computer learning evaluation*
● *Preclinical education*

Abstarct no. 48**Serum Level of Squamous Cell Carcinoma Antigen in Invasive Squamous Cell Carcinoma of Uterine Cervix: Compare Between Stage IB-IIA and IIB-IV****Sirimas Ingkanart and Suttida Intharaburan***Department of Obstetrics and Gynecology, Phramongkutklo Hospital*

Objective : To compare serum squamous cell carcinoma antigen (SCCA) levels in squamous cell carcinoma of cervix between stage IB-IIA and IIB-IV.

Material and Methods : A prospective cross-sectional study was performed at Phramongkutklo Hospital from September 2009 – March 2010. Cervical squamous cell carcinomas of cervix stage IB-IV were recruited. Serum SCCA were measured and level of more than 1.9 ng/mL was defined as elevated level. Proportions of patients with elevated SCCA were compared between stage IB-IIA and IIB-IV.

Results : Forty-four patients diagnosed squamous cell carcinoma of cervix were included, 13 and 31 patients in stage IB-IIA and stage IIB-IV groups, respectively. Elevated SCCA levels were found in 59.1%. There were significantly different in number of SCCA elevated patients between two groups (15.4% vs 77.4%, $p < 0.001$). SCCA were associated with FIGO stage and tumor size > 4 cm ($p < 0.001$). Two from thirteen patients stage IB-IIA had elevated SCCA levels and both of them required postoperative radiotherapy.

Conclusion : There was significantly higher proportion of patients with elevated SCCA in squamous cell cervical carcinoma stage IIB-IV than in stage IB-IIA. Levels of SCCA were correlated with tumor size and FIGO stage.

Key Words : ● *Cervical cancer* ● *Squamous cell carcinoma antigen*

Abstract no. 49**C-Reactive Protein (CRP) Level in Thai Reproductive-aged Women with Polycystic Ovary Syndrome****Chakpan Supadech, Pichai Leerasiri, Manee Rattanachaiyanont,****Kitirat Techatraisak, Surasak Angsuwathana, Prasong Tanmahasamut,****Suchada Indhavivadhana, Thanyarat Wongvananurak and Chongdee Dangrat***Gynecologic Endocrinology Unit, Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University*

Objectives : To evaluate C-Reactive Protein (CRP) level in Thai Reproductive-aged Women with Polycystic Ovary Syndrome (PCOS), comparing them to a control group.

Participants : Fouty-two patients in each group of Thai Reproductive-aged Women with PCOS and without PCOS. *Materials and methods:* Serum CRP was identified as highly sensitive C reactive protein (hs CRP) (CardioPhase[®] hsCRP ; SIEMENS).

Results : Median hs CRP level in the PCOS group was higher than in the control group but the difference was not statistically significant (1.65 (0.16-16.10) vs. 0.54 (0.17-6.53) mg/L; p-value = 0.058). The median CRP level was not significantly higher in the PCOS than in the control group for the overweight-obese women subgroup (BMI ≥ 23 kg/m²; 3.36 (0.16-16.1) vs. 1.33 (0.44-6.53) mg/L; p-value = 0.021; it was statistically significant for Multiple comparison (Bonferroni adjusted) < 0.017). A multiple regression analysis showed that BMI predicted serum CRP level in women with PCOS (β = 0.632, p-value < 0.001).

Conclusion : CRP concentrations in Thai Reproductive-aged Women with Polycystic Ovary Syndrome (PCOS) were not higher than without PCOS group. BMI was a factor associated with CRP level in Thai Reproductive-aged women with PCOS.

Key Words : ● *Polycystic ovary syndrome* ● *C reactive protein*

Abstract no. 50**Identification of Novel Low Density Lipoprotein Epitopes for Renal Tubulointerstitium Injury that Induce Autoimmunity****Bancha Satirapoj^{1, 2}, Kevin W Bruhn², Cynthia C Nast^{2, 3}, Ying Wang², Janine LaPage², Lynetta Phillips² and Sharon G Adler²**¹*Division of Nephrology, Phramongkutkiao Hospital and College of Medicine, Bangkok, Thailand*²*Harbor-UCLA Los Angeles Biomedical Research Institute, Torrance, California*³*Cedars-Sinai Medical Center, Los Angeles, California*

Introduction: Renal tubulointerstitium in chronic kidney disease (CKD) expresses features of inflammatory reaction, immune responses and oxidative stress. Reactive oxygen species cause lipid peroxidation of LDL, which may contribute to progressive CKD and systemic inflammation.

Objective: Our aim was to identify oxidative kidney damage and the action of novel oxidative antigens within the kidney lesion after progressive renal injury.

Methods: Remnant kidneys (RK) after 5/6 nephrectomy were harvested at 2 days, 2 wks and 4 wks for immunohistochemical staining using a monoclonal antibody to Ox-LDL, and antibodies to major histocompatibility complex class II (MHC II). C57BL/6 mice were subjected to left kidney unilateral ureteral obstruction (UUO). At 14 days renal tissue was harvested and renal T-lymphocytes were extracted. RAW264.7 cells were treated with Ox-LDL at varying concentrations and co-cultured with renal T-lymphocytes. Culture supernatant was collected for IFN-gamma ELISA and BrdU Cell Proliferation ELISA.

Results: Ox-LDL staining and tubulointerstitial fibrosis and atrophy were not seen in control kidneys but increased over time in the RK at 2 days, 2 wks and 4 wks. Cells co-staining for MHC II and Ox-LDL were observed in RK after 5/6 nephrectomy. Serial section studies reveal co-staining of Ox-LDL with receptor (LOX-1) in affected renal tubular cells at all time points after 5/6Nx. Similarly, Ox-LDL was also present in tubules after UUO, CD3 positive T lymphocytes were present in the interstitium. Ox-LDL exposure up-regulated MHC II expression on the surface of RAW264.7 cells, and Ox-LDL-treated RAW264.7 cells also significantly stimulated cell proliferation and IFN-gamma secretion by renal tubulointerstitial T-lymphocytes isolated from kidneys after UUO.

Conclusion: This study demonstrates that the tubulointerstitial inflammatory infiltrate that accompanies renal injury may transform native proteins into neo-antigens, inducing interstitial autoimmunity. Autoimmunity to altered native renal antigens may foster continued tubulointerstitial damage.

Key Words : ● *Tubulointerstitial injury* ● *Oxidized low density lipoprotein* ● *Autoimmunity*
● *T lymphocytes*

Abstract no. 51

Comparison of Prosthetic ROM of Cementless Stems with Different Reduced Neck Designs

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Purpose : Various designs of reduced neck have been developed to improve prosthetic ROM. However, few studies validated whether reduced neck designs work well after implantation. The purpose of this study was to compare prosthetic ROM between two commercially available stems with different designs of reduced neck using virtual implantation.

Material and Method : CT data of fifty patients who had undergone cementless THA using CT-based navigation system were collected. An anatomical stem with an anatomical neck shape mimicking a native asymmetric femoral neck and a straight tapered stem with a trapezoidal neck were virtually implanted in each patient. In the same cup alignment (40° of inclination and 15° of anteversion), prosthetic ROM in flexion, extension, abduction, internal rotation at 90 degrees of flexion and external rotation were recorded with two femoral head sizes (28 and 32 mm) and three offsets (-4, 0, +4 mm).

Results : Stem alignment was significantly different between both stems. However, the anatomical stem with an anatomical neck shape showed greater ROM in all directions when combined with 28 mm. Even when combined with 32 mm, it showed greater ROM in 12 of 15 simulations (80%). With -4 mm offset of 32 mm head, the anatomical stem showed the lowest flexion ROM [mean 121.8° for the anatomical stem VS 122.6° for the tapered stem, p=0.0219].

Conclusion : The anatomical asymmetric neck shape promotes better prosthetic ROM when combined with 28 mm head and its advantages are preserved even with use of 32 mm head. However, short offset decreases the advantage of the anatomical neck design in flexion ROM.

Key Words : ● Prosthetic ROM

Abstract no. 52

Tibial Footprints for Single Anatomical Anterior Cruciate Ligament Reconstruction: the Cadaveric Study

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Background : ACL reconstruction is the gold standard for the torn ACL. To perform the anatomic reconstruction, knowledge of the footprint location is important. This study focused on the ACL tibial footprint with relationship to the anterior horn of lateral meniscus.

Methods : Twenty knee specimens from the anatomy department were obtained and dissected. The footprint area was determined by locating the tibial stump of ACL first, and then the mid portion of the footprint was identified. The relationship between the posterior border of anterior horn of lateral meniscus to the mid portion of the ACL tibial footprint was determined.

Results : We have found that the mid portions of the ACL tibial footprint in all specimens were not in the same line with the posterior border of anterior horn of lateral meniscus. They locate anteriorly, with the average of 3.17 millimeters (2.92 millimeters - 3.42 millimeters)

Conclusion : The mid portions of the ACL tibial footprint are anterior to the posterior border of anterior horn of lateral meniscus. This information will help the surgeons to locate the footprint with more accuracy while performing the anatomic ACL reconstruction.

Key Words : ● ACL ● Tibial footprint ● Anatomy

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Abstract no. 53

Successful Decompressive Craniectomy for Cerebral Infarction in the Young

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Background : Cerebral infarction can occur in the young patient (Stroke in the young: age less than 40 years) with or without risk factor. Decompressive craniectomy is the life saving procedure to treat intractable intracranial hypertension from many causes include malignant cerebral infarction. Many previous research result were demonstrated the unclear outcome of middle cerebral territory cerebral infarction treat by decompressive craniectomy.

Objective : To report the successful decompressive craniectomy for cerebral infarction in the young patient

Material&method : Descriptive study, cases series. All the cerebral infarction (Large middle cerebral artery territory) young patients (age <40 years) data that admitted to treat by decompressive craniectomy were collected and analyzed. All of the patients had clinical brain herniation in the coma stage (Mean GCS = 4 decerebrate posture) and were failed to responded with medical treatment. The decompressive craniectomy was done within 6 hours after the clinical deterioration. The skull was removed at least 10 x10 cm., durotomy to open the swelling brain, dura was loosely closed with artificial dura (duragen) or gelfoam, and without further brain damage (without lobectomy). After surgery the medical control of increased intracranial hypertension by low dose mannitol, diuretic, steroid, were continued for 5 days, anticonvulsant, normothermia, antibiotic were used as indicated. The result were evaluated by morbidity : modified rankin score (0-6 : Normal to death) at 6 months and 1 years and percent of mortality rate.

Result : All of the patients are survive (no death, mortality rate = 0%). The mean age is 36 years (27-40 years). All of the patient recover from coma : decerebrate posture to normal consciousness in the first day post operation and recover to independent ambulate at 1 month to 6 months. The morbidity: modified rankin score mean 3. In patient with lt. Middle cerebral artery territory infarction and had speech disable:global aphasia were improved to mild motor dysphasia,the main disable are the contralateral hand weakness. Mean operation time is 1 hour (45 - 90 mins) bleedless operation that blood transfusion wasn't required.

Conclusion : The outcome of decompressive craniectomy for large cerebral infarction in the young (age less than 45 years) is excellent (no mortality, mild-moderate disability) and decompressive craniectomy

is the life saving procedure of choice and bleedless operation. In the young patient with coma from intractable increased intracranial pressure brain, herniation should be operated within 6 hours before brainstem dysfunction. Even comatose decerebrate patient can recover to normal conscious with the acceptable mild disability.

Key Words : ● *Decompressive craniectomy* ● *Cerebral infarction*
● *Intractable increased intracranial pressure,young age*

Abstract no. 54

The Successful Botulinum Toxin Injection for the Treatment of Abnormal Movement

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Background : The abnormal movement such as Hemifacial spasm, Blepharospasm, Cervical torticollis should be treated by surgery: Microvascular decompression for Hemifacial spasm, Surgical denervation for cervical torticollis, medication. Botulinum toxin type A injection is an effective alternative treatment (Chemodenervation, Transient neuromuscular junction blocking) for patient who select this treatment, patient who cannot tolerate the general anesthesia, recurrence or failure after surgery.

Objective : To report the case series of successful botulinum toxin injection for treatment of abnormal movement and the most effective dose, technic, site of injection for longest duration.

Material&method : All cases of Botox injection were collected and analyzed after 1 year follow up period. The appropriated Dose for long duration were recorded, approximated dose depend on muscle size, amount of affected muscle, severity of the disease, the overall dose range from 20-100 unit. The point for injection was the site of twitching muscle (clinical examination, EMG wasn't need to used), BOTOX were injected by subcutaneous & intramuscle, for hemifacial spasm 6 points of injection around periocculi, 3 points for perioralis muscle, for cervical torticollis 4-5 points at the origin, middle, insertion of sternocleidomastoid muscle, additional 1-2 points for spasm of platysma and trapezius.

Result : All cases have excellent result without complication 100% resolve of hemifacial spasm, cervical torticollis the patient's neck was in normal position. The longest duration were 6 months, mean duration 3 months, Maximum dose is 100 unit for cervical torticollis. 20-30 units for hemifacial spasm. All patients were satisfied for this treatment. In this study was aim to find the most effective dose, technic of injection, site of injection for longest duration. The relative cosmetic result to decreased skin marked of shrinkage is excellent.

Conclusion : The Botulinum toxin is useful for treatment of the abnormal movement and should be use before or after surgery. The result was effective as surgical treatment but decreased the risk from anesthesia and surgery and can be the choice of treatment for recurrence hemifacial spasm after first surgical operation. The longer duration the less frequent of injection should be done by appropriated technic and dose of injection.

Key Words : ● *Botulinum toxin* ● *BOTOX* ● *Hemifacial spasm* ● *Upper extremity* ● *Cervical torticollis*
● *Abnormal movement*

บทคัดย่อที่ 55

จริยธรรมกับการเปลี่ยนแปลงพฤติกรรม

ศุภกิจ สงวนดีกุล

ศัลยแพทย์ กองศัลยกรรม โรงพยาบาลพระมงกุฎเกล้า

บทนำ : อติศตวรรษที่การแพทย์ได้รับการยอมรับและประชาชนนับถือแพทย์เสมือนเทพเจ้า และเชื่อว่าเทพเจ้าแห่งการแพทย์ (Asclepius) แพทย์คนแรกที่ช่วยเยียวรักษาผู้เจ็บป่วยให้หายจากโรค ได้ถ่ายทอดความรู้ มีคำปฏิญาณตนเพื่อดำรงตนเป็นแพทย์ที่ดี (Hippocratic oath) สืบทอดมานับพันปี ปัจจุบันมีความเลื่อมทางจริยธรรมจากระบบบริการทางการแพทย์ และความผิดพลาดส่วนบุคคลดังที่ปรากฏเป็นข่าวอย่างมากมาย การอบรมจริยธรรมโดยราชวิทยาลัยศัลยแพทย์เป็นการแก้ปัญหาอย่างเป็นรูปธรรมเกิดขึ้น 4 ปีที่ผ่านมา เพื่อสร้างศัลยแพทย์ที่ดี และเป็นปฏิบัติการจิตวิทยาเชิงรุกสร้างความรู้ความเข้าใจแก่แพทย์และประชาชนทั้งประเทศเพื่อส่งเสริมความสัมพันธ์ระหว่างแพทย์และผู้ป่วยแก้ไขวิกฤตศรัทธา การศึกษาวิจัยถึงผลกระทบด้านการเปลี่ยนแปลงพฤติกรรมทางคลินิก จากการเผยแพร่และการอบรมจริยธรรม (Ethic & Behavioral change) เป็นเรื่องที่ต้องดำเนินการต่อเนื่องเพื่อรายงานผลระยะสั้นและระยะยาว

วัตถุประสงค์ : เพื่อรายงานการเปลี่ยนแปลงพฤติกรรมทางคลินิกของนักศึกษาแพทย์ แพทย์ประจำบ้านศัลยกรรม อาจารย์แพทย์ เปรียบเทียบระหว่างกลุ่มอบรมและกลุ่มที่ไม่ได้อบรมจริยธรรม

วิธีการ : การศึกษาวิจัยเชิงพรรณนา (descriptive study) รายงานผลจากการสังเกตพฤติกรรมทางคลินิก (clinical observation) ของ นักศึกษาแพทย์ แพทย์ประจำบ้านศัลยกรรม อาจารย์แพทย์ ประชากรที่ศึกษา 40 คน: แบ่งกลุ่ม 2 กลุ่ม เปรียบเทียบต่างระยะเวลา (historical comparative study) เปรียบเทียบระหว่าง 1) กลุ่มควบคุม (non ethic group): ไม่ได้รับหรือไม่สนใจอบรมจริยธรรม 2.) กลุ่มทดลอง (ethic group) ผ่านการอบรมด้านจริยธรรม ระยะเวลาศึกษา 2 ปี มีการกำหนดและบันทึกพฤติกรรมการแสดงออกที่ดี และไม่ดี ข้อผิดพลาดร้ายแรงทางคลินิก ศึกษาพฤติกรรม การแก้ปัญหาทางคลินิก จาก การปฏิบัติงาน การประชุม Morbidity & Mortality report, Monthly Report ซึ่งรายงานข้อผิดพลาดที่มีผลกระทบต่อการรักษาและการหาแนวทางแก้ปัญหา (clinical decision making) บันทึกปัญหาทางจริยธรรมที่เกิดขึ้น ผลการรักษาอัตราการพิการตาย เปรียบเทียบระหว่าง 2 กลุ่ม

ผลการวิจัย : กลุ่มทดลองที่ได้รับการอบรมจริยธรรม (ethic group) ไม่พบข้อผิดพลาดทางจริยธรรม พฤติกรรมการแสดงออกที่เหมาะสม (good behavior: communication, sympathy-empathy, respectiveness, responsibility, high competency) มีผลการรักษาที่ดีกว่า (high success rate) อัตราตาย พิการต่ำกว่า (low morbidity & mortality, no surgical mortality), มีข้อผิดพลาดทางคลินิกต่ำกว่ากลุ่มควบคุม (good clinical decision making) หรือถ้าเกิดปัญหา รู้จักยอมรับข้อผิดพลาดและระมัดระวังไม่ให้เกิดข้อผิดพลาด (good responsibility, learn from the fault, aware & prevention of complication) สนใจศึกษาด้วยตนเอง (enthusiasm of continuous medical learning) เพื่อพัฒนาความรู้และฝีมือผ่าตัดร้อยละ 90 ของกลุ่มมีพฤติกรรมที่ดีตรงตามเป้าหมายของการอบรม **กลุ่มควบคุมที่ไม่ได้รับการอบรมจริยธรรม (non ethic group)** พฤติกรรมการแสดงออกที่ไม่เหมาะสม (inappropriated behavior) ตรงข้ามกับพฤติกรรมที่เหมาะสมดังกล่าวข้างต้น หรือไม่แสดงพฤติกรรมที่ดีให้ปรากฏ

สรุป : การอบรมจริยธรรมมีเป้าหมายเพื่อเปลี่ยนแปลงพฤติกรรมผู้เรียนให้เป็นที่ขึ้นเหมาะสมกับการเป็นศัลยแพทย์ที่ดี ซึ่งสอดคล้องกับผลการวิจัยที่กลุ่มทดลองส่วนใหญ่มีการเปลี่ยนแปลงพฤติกรรมในทางที่ดี กว่ากลุ่มควบคุม

Key Words : ● จริยธรรม ● พฤติกรรม

บทคัดย่อที่ 56

การประเมินประสิทธิภาพของวิธีตรวจพิสูจน์เชื้อวัณโรค (*M. tuberculosis*) จากเชื้อที่เพาะได้ด้วยวิธี TB Ag MPT 64 เปรียบเทียบกับวิธี PCR for TB

สมพงศ์ ตริวัชรกร อรรถสิทธิ์ อุบลบาน ชัยวัฒน์ โชติธนอธิวัฒน์ และ พงษ์ศักดิ์ นนทวงษ์

แผนกจุลชีววิทยา กองพยาธิคลินิก สถาบันพยาธิวิทยา

บทคัดย่อ : แผนกจุลชีววิทยา กองพยาธิคลินิก สถาบันพยาธิวิทยา ได้ทำการประเมินประสิทธิภาพของวิธีตรวจพิสูจน์เชื้อวัณโรค (*M. tuberculosis*) จากเชื้อที่เพาะได้ด้วยวิธี TB Ag MPT 64 (SD MPT64TB Ag Kit) ซึ่งเป็นชุดทดสอบที่อาศัยหลักการ Immunochromatography โดยใช้ monoclonal antibody ที่มีความจำเพาะต่อ MPT64 antigen ซึ่งเป็น secretory protein (24 kDa) ที่ได้จากเชื้อ *M. tuberculosis* ที่มีชีวิตและอยู่ในระยะที่มีการแบ่งตัว เปรียบเทียบกับวิธี PCR for TB โดยใช้เชื้อวัณโรคที่เพาะได้จากห้องปฏิบัติการจุลชีววิทยา 50 สายพันธุ์ (*M. tuberculosis* 35 สายพันธุ์, NTM 15 สายพันธุ์) พบว่า sensitivity เท่ากับ 87.50% และ specificity เท่ากับ 88.89%

Key Words : ● *M. tuberculosis* ● NTM ● TB Ag MPT 64 ● PCR for TB

บทคัดย่อที่ 57

ผลสัมฤทธิ์ และเจตคติของนักเรียนพยาบาลกองทัพบกชั้นปีที่ 2 ต่อการเรียนเรื่องชีวโมเลกุลโดยใช้บทเรียนคอมพิวเตอร์ช่วยสอนระบบสื่อประสม

อลิสสา เสนามนตรี สรณันท์ อนุชน¹ ธีรประภา สุริยะมณฑล และ อัญชลี วิศว์โกคา

ภาควิชาชีวเคมี วิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า¹ ภาควิชาความรู้พื้นฐาน วิทยาลัยพยาบาลกองทัพบก

ความสำคัญของปัญหา : ชีวโมเลกุลเป็นหัวข้อสำคัญในวิชาชีวเคมี มีเนื้อหาที่มีความเป็นนามธรรมสูง การเรียนปกติอาจทำให้ผู้เรียนไม่สามารถทำความเข้าใจได้ทั้งหมด ทำให้ผลสัมฤทธิ์ทางการเรียนอยู่ในระดับต่ำ เกิดเจตคติในทางลบต่อการเรียน บทเรียนคอมพิวเตอร์ช่วยสอนระบบสื่อประสมเรื่องชีวโมเลกุลเป็นสื่อหลายมิติ ผู้เรียนสามารถเรียนรู้และทบทวนได้ด้วยตนเอง ในเนื้อหาที่ต้องการและตามความสามารถผู้เรียนเป็นการเพิ่มประสิทธิภาพการเรียนรู้ ทำให้ผลสัมฤทธิ์ทางการเรียนสูงขึ้นและมีผลให้เกิดเจตคติในทางบวกต่อการเรียน

วัตถุประสงค์ : เพื่อศึกษาผลสัมฤทธิ์ทางการเรียน เจตคติต่อการเรียนและบทเรียนคอมพิวเตอร์ช่วยสอนระบบสื่อประสมเรื่องชีวโมเลกุล

ระเบียบวิธีการศึกษาทดลอง : พัฒนาบทเรียนคอมพิวเตอร์ฯ เรื่อง คาร์โบไฮเดรตและลิพิด โดยใช้โปรแกรมสำเร็จรูปออเธอร์แวร์ (Authorware) นำไปใช้กับนักเรียนพยาบาลกองทัพบก ชั้นปีที่ 2 ปีการศึกษา 2552-2554 เก็บรวบรวมข้อมูลโดยใช้แบบทดสอบวัดผลสัมฤทธิ์ทางการเรียนด้านพุทธิพิสัย แบบประเมินเจตคติต่อการเรียนเรื่องชีวโมเลกุลและบทเรียนคอมพิวเตอร์ฯ วิเคราะห์ข้อมูลเพื่อหาค่าสถิติพื้นฐาน

ผลการวิจัย : 1) คะแนนเฉลี่ยผลสัมฤทธิ์ทางการเรียนเมื่อใช้บทเรียนคอมพิวเตอร์ฯ มีค่าสูงกว่าคะแนนเฉลี่ยของการเรียนปกติอย่างมีนัยสำคัญที่ระดับ < 0.01 2) นักเรียนที่ใช้บทเรียนคอมพิวเตอร์ฯ มีคะแนนเฉลี่ยเจตคติที่ดีต่อการเรียนชีวโมเลกุลและต่อบทเรียนคอมพิวเตอร์ฯ อยู่ในระดับเห็นด้วย ($X \pm S.D. = 4.15 \pm 0.67$) และ ($X \pm S.D. = 4.16 \pm 0.66$) ตามลำดับ

สรุป : การใช้บทเรียนคอมพิวเตอร์ช่วยสอนทำให้ผลสัมฤทธิ์ทางการเรียนสูงขึ้นและทำให้นักเรียนมีเจตคติที่ดีต่อการเรียนสามารถใช้ช่วยสอนในกรณีที่ขาดบุคลากรหรือมีนักเรียนจำนวนมาก

Key Words : ● Attitude ● Molecular Biochemistry

Abstract no. 58**Isolated Ocular Relapse in Childhood Acute Lymphoblastic Leukemia During Second Interim Maintenance Phase of Chemotherapy**

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Background : Over 80% of acute lymphoblastic leukemia (ALL) in children is curable by using combinations of chemotherapy. However, 20-30% of the cases still suffer from disease relapse. The most common site of relapse is the bone marrow, although relapses at extramedullary sites such as the central nervous system (CNS) and testis also occur, but less frequently. Intraocular relapses of ALL may occur but with rarity, either alone or in combination with relapse at other sites. At our hospital, one case of isolated ocular relapse ALL was reported.

Case Report : A 10 years old Thai boy who had underlying disease high risk acute lymphoblastic leukemia (ALL) was treated with TPOG protocol for 11 months. During second interim maintenance phase at the 9th week, he presented with progressive visual loss of right eye for a month prior to admission. On physical examination, Light perception examination revealed visual acuity of right eye. Fundoscopic examination revealed infiltrative lesion with hemorrhage. No lymphadenopathy or hepatosplenomegaly were detected. Neurological examination was within normal limit. CBC was within normal limit and no blasts were seen in peripheral blood smear. Bone marrow examination was normal. CSF was negative for malignancy cell. MRI brain included orbit shown infiltrative mass size 1.2x1 cm in diameter at right posterior chamber. No other part of brain had involvement or abnormal signals. At that point, He was treated with local radiotherapy at dose 6 mV, 200 cGy for 15 times. Total dose was 3,000 cGy plus systemic chemotherapy included prednisolone, vincristine, doxorubicin, L-asparaginase, cytosine arabinoside, etoposide, high dose methotrexate, mercaptopurine, dexamethasone and triple intrathecal methotrexate, hydrocortisone, cytosine arabinoside (MHA). The patient was followed-up with pediatric hemato-oncologists regularly and fundoscopic examination after complete induction of chemotherapy revealed decreased infiltrative lesion but had some degree of retinal detachment. However the visual acuity improved to hand movement of the right eye.

Discussion and Conclusion : Relapse of childhood ALL involving the eyeball is a rare event, occurring in 2.2% of relapsing children. The outcome is more favorable in cases of ocular relapse off therapy, as it is observed in all relapses. Treatment of the reported cases consisted of systemic chemotherapy

and radiotherapy (RT) on the affected eye. Long-term disease-free survival (DFS) after eye relapse was observed only in patients treated with chemotherapy and local radiotherapy (RT), and second eye relapse occurred only in few patients treated with low doses of radiotherapy (RT). Although, disease-free survival was favorable but the vision of the affected eyes might not be improved because of the damaged vision incurred by permanent retinal detachment.

Key Words : ● *Acute lymphoblastic leukemia* ● *Ocular relapse* ● *Chemotherapy*

บทคัดย่อที่ 59

ทัศนคติ พฤติกรรม และความต้องการใช้บริการสปาของกำลังพลและครอบครัว ในค่ายศรีพัชรินทร

จิตรลีนี สนิท

โรงพยาบาลค่ายศรีพัชรินทร

การศึกษาอิสระครั้งนี้เป็นการศึกษาเชิงพรรณนา มีวัตถุประสงค์เพื่อศึกษาทัศนคติและพฤติกรรมของกำลังพลค่ายศรีพัชรินทร และครอบครัว และเพื่อศึกษาความต้องการการให้บริการสปากำลังพลค่ายศรีพัชรินทร และครอบครัว กลุ่มตัวอย่างในการวิจัยคือ กำลังพลค่ายศรีพัชรินทรและครอบครัว จำนวน 300 คน สุ่มตัวอย่างโดยวิธีการสุ่มแบบแบ่งชั้น และเลือกกลุ่มตัวอย่างในแต่ละชั้นโดยการสุ่มอย่างมีระบบ เครื่องมือที่ใช้ในการวิจัยเป็นแบบสอบถาม มีความเที่ยงในการวัดทัศนคติเท่ากับ 0.75 วิเคราะห์คุณลักษณะของประชากรด้วย สถิติเชิงบรรยาย ได้แก่ ความถี่ ร้อยละ ค่าเฉลี่ย และส่วนเบี่ยงเบนมาตรฐาน เปรียบเทียบความแตกต่างโดยใช้ สถิติ t-test และ One way ANOVA

ผลการวิจัย

1. กำลังพลค่ายศรีพัชรินทร และครอบครัวมีทัศนคติที่ติดต่อด้านประโยชน์ของการใช้บริการสปา โดยเห็นด้วยกับประโยชน์ทั้งโดยรวม และในแต่ละประเด็นย่อย ได้แก่ ช่วยให้ผู้สุขภาพแข็งแรง ช่วยผ่อนคลายความตึงเครียด ใช้เวลาว่างให้เป็นประโยชน์ ช่วยเพิ่มความสวยงาม และรักษาอาการเจ็บป่วย

กำลังพลค่ายศรีพัชรินทร และครอบครัวมีทัศนคติเกี่ยวกับประโยชน์ของการใช้บริการสปา แตกต่างกันอย่างเฉพาะประเด็น ช่วยเพิ่มความสวยงาม และประเด็นช่วยให้สุขภาพแข็งแรง โดยในการช่วยเพิ่มความสวยงาม เพศหญิงมีทัศนคติต่อประโยชน์ของการใช้บริการสปามากกว่าเพศชาย สำหรับผู้มีอายุ 31-35 ปี มีทัศนคติต่อประโยชน์ของการใช้บริการสปาในการช่วยเพิ่มความสวยงามมากกว่าผู้ที่มีอายุ 41 ปีขึ้นไป ส่วนครอบครัวของกำลังพลค่ายศรีพัชรินทรมีทัศนคติต่อประโยชน์ของการใช้บริการสปาในการช่วยเพิ่มความสวยงามมากกว่ากำลังพล สำหรับประเด็นช่วยให้สุขภาพแข็งแรง ผู้ที่มีอาชีพพนักงานรัฐวิสาหกิจ/เอกชน มีทัศนคติต่อประโยชน์ของการใช้บริการสปาต่ำกว่าอาชีพเจ้าของกิจการ ส่วนกำลังพลค่ายศรีพัชรินทร และครอบครัวที่มีระดับการศึกษา และรายได้ต่อเดือนที่ต่างกัน มีทัศนคติต่อประโยชน์ของการใช้บริการ สปาไม่แตกต่างกัน

กำลังพลของค่ายศรีพัชรินทร และครอบครัวส่วนใหญ่เคยใช้บริการสปา โดยประเภทของบริการที่นิยมใช้บริการมากที่สุดคือ บริการนวดฝ่าเท้า รองลงมาคือ บริการนวด ชัดผิว บำรุงหน้า ส่วนใหญ่ให้เหตุผลที่เลือกใช้บริการสปาว่า เพื่อผ่อนคลายความตึงเครียด และส่วนใหญ่ใช้บริการประมาณเดือนละ 1-2 ครั้งต่อเดือน วันเสาร์-อาทิตย์ เป็นวันที่สะดวกไปใช้บริการมากที่สุด สำหรับเวลาที่ต้องการไปใช้บริการมากที่สุด คือ 16.00 น. เป็นต้นไป ส่วนใหญ่ระบุว่าค่าใช้จ่ายต่อครั้งน้อยกว่า 500 บาท

2. หากมีการเปิดสปาในพื้นที่ค่ายศรีพัชรินทร กำลังพลของค่ายศรีพัชรินทร และครอบครัวส่วนใหญ่ต้องการไปใช้บริการ โดยส่วนใหญ่จะไปใช้บริการประมาณ 1-2 ครั้งต่อเดือน วันเสาร์-อาทิตย์ เป็นวันที่สะดวกไปใช้บริการมากที่สุด สำหรับเวลาที่ต้องการไปใช้บริการมากที่สุด คือ 16.00 น. เป็นต้นไป ประเภทของบริการที่ต้องการใช้มากที่สุดคือ บริการนวดฝ่าเท้า รองลงมาคืออบสมุนไพร นอกจากนี้ กำลังพลของค่ายศรีพัชรินทร และครอบครัวได้ให้ข้อเสนอแนะอื่นๆ เกี่ยวกับความต้องการใช้บริการจากสปาที่ค่ายศรีพัชรินทร ได้แก่ ค่าใช้จ่ายไม่ควรแพงเกินไป และเลิกคีนได้ ควรเปิดบริการหน้าค่ายฯ และจัดสถานที่ให้สวยงาม จัดหาเจ้าหน้าที่ที่มีความชำนาญสุภาพ บริการเร็ว ควรมีการฝึก โยคะและเน้นประชาสัมพันธ์

Key word : ● ทัศนคติ ● พฤติกรรม ● สปา

Abstarct no. 60**Occupational Exposure to Pyrethroid-bifenthrin in the Mosquito Control
Spraymen of Preventive Medicine Unit, Royal Thai Army**

**Samat Preeklang, Chalita Sukhawarn, Vira Thongpum, Wannipa Pukjinda,
Werasak Sangarun, Duangporn Phulsuksombati, Chaiyaphruk Pilakasiri
and Prangchai Settachan**

Armed Forces Research Institute of Medical Sciences

Background : The preventive medicine unit is an important unit of the Royal Thai Army. The mission is to support the preventive medical management, environmental control and other risk factors leading to adverse health and mental effects of the military forces. Because Thailand is in the tropic, where various disease vectors are present, especially mosquitoes. They were carriers of several diseases, such as malaria, hemorrhagic, chikungunya.

Objective : The objectives of this research were to study occupational exposure of malathion concentrations and health effects in the mosquito control spraymen.

Materials and Methods : The aerosols of malathion were collected by using 100 cm² cotton patches attached on skin of upper legs where the potential dermal contact was high. The health effects were evaluated by interview after application of malathion. The study subjects were 30 volunteers of the mosquito control spraymen of the Preventive Medicine Unit, Royal Thai Army who exposed to malathion from insecticide application in Bangkok and vicinity areas.

Results : The volunteers exposed to average malathion concentration of $0.20 \pm 0.16 \mu\text{g}/\text{cm}^2$ ranging from 0.05 to $0.60 \mu\text{g}/\text{cm}^2$. After working, sixty percent of the volunteers developed health effects. The most commonly found symptoms were skin and upper respiratory irritation (72.22%); the next were dizziness-vomiting (55.56%), headache (33.33%), short of breathing (16.67%), chest tightness (5.56%), hands and face numbness (5.56%) respectively but not significantly different between malathion concentration through dermal contact and health symptoms ($p > 0.05$).

Conclusion : The spraymen exposed to average malathion concentration of $0.20 \pm 0.16 \mu\text{g}/\text{cm}^2$ and majority of them developed health effects. Most of the symptoms found were skin and upper respiratory irritation. These symptoms were not significantly different with malathion concentration from application. However, a good training of the working procedure and more information for spraymen are extremely necessary for the application of this pesticide.

Key Words : ● Malathion ● Cotton patches ● Mosquito control spraying ● Health effects

บทคัดย่อที่ 61

การศึกษาข้อมูลปัญหาสุขภาพของกำลังพลวิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า

กิจจา สุวรรณ¹ และ รุ่งราวัญญ์ เดชอภิรักษ์ชน²

¹ภาควิชาสรีรวิทยา กองการศึกษา; ²แผนกธุรการกำลังพล กองอำนวยการ วิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า

ความเป็นมา : ปัญหาสุขภาพจะส่งผลกระทบต่อตนเอง ครอบครัว และหน่วยงาน การจะแก้ไขปัญหาสุขภาพ และดำเนินการสร้างเสริมสุขภาพจำเป็นต้องมีข้อมูลปัญหาสุขภาพที่ถูกต้อง และเพียงพอ

วัตถุประสงค์ : รวบรวมข้อมูลปัญหาสุขภาพของกำลังพล วิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า (วพม.) เพื่อนำไปใช้เป็นข้อมูลในการวางแผนแก้ไขปัญหา และดำเนินงานการสร้างเสริมสุขภาพของกำลังพล วพม.

วิธีการ : รวบรวมข้อมูลจากผลการตรวจสุขภาพประจำปี ของกำลังพล วพม. ทั้ง 2 เพศ ตั้งแต่ปี 2551-2554 โดยเก็บข้อมูลพฤติกรรม ความดันโลหิต และดัชนีมวลกาย ในทุกกลุ่มอายุ จำนวน 289, 291, 330 และ 325 คน ตามลำดับ และเก็บข้อมูลผลของระดับน้ำตาล total cholesterol, LDL cholesterol, HDL cholesterol และ triglyceride ในเลือด ในกลุ่มอายุตั้งแต่ 35 ปี ขึ้นไปจำนวน 252, 260, 254, และ 242 คน ตามลำดับ

ผลการศึกษา : พบว่าในปี 2551-2554 มีผู้ที่ออกกำลังกายต่ำกว่าเกณฑ์มาตรฐานร้อยละ 84.4, 78.0, 79.1 และ 80.9 สูบบุหรี่ร้อยละ 14.2, 17.5, 15.5 และ 12.3 ดื่มเครื่องดื่มแอลกอฮอล์เป็นประจำร้อยละ 5.9, 6.5, 5.8, และ 7.1 มีภาวะอ้วน (BMI \geq 25) ร้อยละ 40.1, 42.0, 36.7 และ 36.2 มีภาวะความดันโลหิตสูง (BP \geq 140/90 mmHg) ร้อยละ 28.1, 26.3, 22.4 และ 29.3 ตามลำดับ จากผลการตรวจทางห้องปฏิบัติการ พบผู้มีระดับน้ำตาลในเลือดสูง (blood sugar \geq 126 mg/dL) ร้อยละ 9.5, 6.5, 10.2 และ 6.6 มีระดับ total cholesterol สูง (\geq 200 mg/dL) ร้อยละ 62.7, 62.7, 63, และ 85.5 มีระดับ LDL cholesterol สูง (\geq 130 mg/dL) ร้อยละ 46.8, 52.3, 50.4 และ 68.6 มีระดับ triglyceride สูง (\geq 150 mg/dL) ร้อยละ 31.4, 28.4, 28.0 และ 30.9 มีระดับ HDL cholesterol ต่ำ (ชาย $<$ 45 mg/dL หญิง $<$ 50 mg/dL) ร้อยละ 53.4, 55.5, 50.1 และ 62.3 ตามลำดับ

สรุป : กำลังพล วพม. มีภาวะอ้วน ความดันโลหิตสูง และมีพฤติกรรมที่เสี่ยงต่อการเกิดโรคจำนวนมากโดยเฉพาะอย่างยิ่ง การขาดการออกกำลังกายที่ได้เกณฑ์มาตรฐาน และมีผู้มีระดับ cholesterol ในเลือดสูงจำนวนมากอย่างต่อเนื่อง และเพิ่มมากยิ่งขึ้นในปี 2554

Key Words : ● Cholesterol ● การออกกำลังกาย ● ปัญหาสุขภาพ ● กำลังพล วิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า

Abstract no. 62**Trans-sternal Approach to the Cervicothoracic Junction :
Our Experience of Two Cases****Roongrath Chitragran and Sompob Poopitaya***Division of Spine Surgery, Department of Orthopaedics, Phramongkutklao Hospital and College of Medicine*

Objective : To present our experience with the transternal approach for pathologies at the cervicothoracic junction. Surgical exposure of the cervicothoracic junction and upper thoracic spine is often a challenging exercise due to the overlying clavicle and sternum as well as the close proximity of the great vessels.

Methods : We have used the transternal approach for decompression, reconstruction and plate fixation in two patients. One of the patient was suffering from tuberculosis, another one from a metastasis lung cancer. Surgical details are discussed.

Results : All patients had good relief from upper back and neck pain and improved in neurological function and all patients had correction of kyphotic deformity with no settling till recent follow up. We did not encounter any intra operative complications. None of our patients developed recurrent laryngeal nerve palsy.

Conclusion : The transternal approach remains the best method for adequate exposure of the anterior of the cervicothoracic junction (C₄ to T₄ vertebrae) through a single incision. Familiarity with the regional anatomy, surgical approach and meticulous intra operative technique ensure minimal complications in this procedure.

Key Words : ● *Transternal approach* ● *Cervicothoracic junction*

Abstract no. 63

Transosseous Blast Fragments Removal : Two Cases Report

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Purpose : Metallic blast fragments in the limbs are rarely removed during debridement and wound exploration except being clearly visible, quite big size or situated in or near the joint. If indicated, we usually remove them with open surgical method. We have 2 soldier patients from 3 southern most provinces situation who sustained blast injuries of their feet many months ago. The wounds healed very well after debridement. But the patients have sustained painful walking for a few months due to a big metallic blast fragment closed to the cuboid. To remove it, we propose a new technique: transosseous (transcuboidal) blast fragment removal.

Methods : After locating the site of the fragment with CT scan. We determine the cuboid with fluoroscopy and then make a 2 cm long incision to expose its dorsolateral surface. A K-wire is inserted to the fragment. A reasonable hole is performed and then the fragment is removed. The wound is closed without bone grafting.

Results : The wounds healed within 2 weeks. The patients can walk full weight bearing without any pain after 2 weeks. Bone healing occurs within 3 months.

Discussion : The patients have sustained painful walking for many months after injuries. To remove the fragments, we can approach through the healed entry site on the medial foot arch, the lateral border of the foot or directly on the plantar surface of the foot. But we may have some difficulties from a long distance of exploration, thick scar tissue, some vital structures and even a painful scar postoperatively. For the new technique, the fragment size should not be larger than 1/3 of the bone size or the fracture will occur.

Conclusion: Transosseous blast fragments removal is an alternative method and can be used successfully in some special situation.

Key Words : ● *Transosseous blast fragments*

Abstarct no. 64**Efficacy of Hemostatic Gel from Chitosan****Suthee Panichkul¹ and Supang Wongkhan²**¹*Department of Military and Community Medicine, Phramongkutkloa College of Medicine;*²*Defence Pharmaceutical Factory, Defence Industry and Energy Center*

Background : Hemorrhage is a leading cause of death from trauma. An advanced hemostatic dressing could augment available hemostatic methods.

Objective : This study aimed to develop a novel natural pharmaceutical preparation for hemostatic gel from chitosan which is the biopolymer from shell of shrimp, crabs and squid pen. And determine the efficacy of chitosan gel on skin irritation test and stop bleeding effect.

Methods : The chitosan gel products (formula D1 and formula 3) were performed in animals and compared skin irritation tests, bleeding time with control and market product as Quick blood stopper.

Results : The result showed that both chitosan gels and Quick blood stopper caused no skin irritation in rabbits (OECD guideline no. 404 for testing of chemicals, 2002). Stop bleeding property of these gel products was performed using bleeding model in rats. All anesthetized-rat's tails were cut for 1 cm. from the end, then soaked with each sample for 3 min and its bleeding time was recorded. Bleeding time of Quick blood stopper, chitosan gel D1, formula 3 and control groups was 14.87 ± 1.36 , 23.04 ± 0.38 , 18.98 ± 1.92 and 20.85 ± 0.59 min, respectively.

Conclusions : The chitosan gel could stop bleeding less than Quick blood stopper. But it was safe, low cost, could be developed in further study and pilot scale manufacturing and suggested to promote the medicinal support for military operation from Ministry of Defence.

Key Words : ● Chitosan ● Hemostatic gel ● Skin irritation ● Bleeding time ● Quick blood stopper

Abstract no. 65**Menopausal Related Symptoms Treatment and Quality of Life
in Thai Women Aged 40 Years and Older at Menopause Clinic (Thai MenRate)**

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Background : Currently mean average of life expectancy of the population are increasing. The health care in the perimenopausal women take out longer and spend more budget of the country. The condition is associated with menstrual symptoms (menopausal related symptoms), osteoporosis and the lack of sex hormones is affect to quality of life for these women is tremendous. To treat menopausal related symptoms is still controversial.

Objective :

1. To study the effect of treating the menopausal related symptoms by various methods and side effects of treatment in women aged 40 years and over who came at menopausal clinic of the study Institutions.
2. To assess the quality of life of women aged 40 years or more who have menopausal related symptoms whom treated by various methods.

Materials and Methods : The study was conducted by observational study. Prospective study was performed by study of postmenopausal women in participating institutions. Data collection was done via selfadministered, menopausal related symptoms, estrogen deficiency symptom, and various methods of treatment can be divided into two methods: the use of drugs (medical modalities) and do not require treatment (non-medical modalities) are stored. Assess the quality of life using a measure of quality of life

3 series is equipped with a quality of life for Thai women in my menstrual Thai MENOOL, SF-36 and a EQ5D.

Result : Participants were 916 women, average age 52 years, mostly in the age group between 50-54 years, 73% were menopause and 30% were surgical menopause. Participants had hypertension 61%. The women who had a history of broken bones and at the wrist were 10 percent. 34.6% used to performed BMD and 61 percent were performed by Mammogram and 28% showed abnormal. 13.5% was found hot flashes, 12% had dry skin, and 11.5% had symptoms of irritability. The deficiency of estrogen hormone was 32.8% but has been treated with hormone replacement therapy 25.7%. Fifty-two percent were advised to change the life style or behavior by eating properly and exercising regularly. The overall quality of life with symptoms associated with menopausal related symptoms lower than those without. The group with the low quality of life was treated by hormone replacement therapy more than those. The vaginal dryness conditions were less but more serious condition.

Conclusion : The menopausal related symptoms affect the quality of life of women aged 40 years and data from this study is preliminary data of the patients were treated at tertiary care hospitals in all regions of Thailand. This has not been studied in Thailand before. However, the data continues to monitor symptoms and side effects caused by the treatment and quality of life for patients who have menopausal related symptoms. And analyzed to find ways to maintain and enhance the quality of life of Thai women in future.

Key Words : ● *Menopausal related symptoms* ● *Menopausal clinic* ● *Quality of life*

บทคัดย่อที่ 66

การศึกษาการบริจาคโลหิตและโรคติดต่อทางโลหิตในพลทหารกองประจำการที่บริจาคโลหิตในโรงพยาบาลกองทัพบกส่วนภูมิภาคใน พ.ศ. 2553

บุญเต็ม แสงดิษฐ์, เปรมฤดี ชัยสุวิรัตน์, จันทิรา นาคบุญนำ, ไตรยศ ธราพร และ ปริญญา นุกุลกิจ
กองธนาคารเลือด สถาบันพยาธิวิทยา ศูนย์อำนวยการแพทย์พระมงกุฎเกล้า

ภูมิหลัง : กลุ่มพลทหารกองประจำการเป็นกลุ่มประชากรวัยหนุ่มกลุ่มใหญ่ที่สามารถชักชวนให้บริจาคโลหิตได้ง่าย แต่กลุ่มนี้อาจมีพฤติกรรมเสี่ยงต่างๆ จนติดเชื้อโรคติดต่อทางโลหิตได้ง่ายด้วย

วัตถุประสงค์ : เพื่อศึกษาการบริจาคโลหิต และความชุกของโรคติดต่อทางโลหิตในกลุ่มพลทหารกองประจำการที่บริจาคโลหิตในโรงพยาบาลกองทัพบกส่วนภูมิภาค เพื่อเป็นข้อมูลในการจัดหาและบริการโลหิตในสถานการณ์ฉุกเฉินทั่วประเทศ

วิธีการ : ส่งแบบสอบถามให้โรงพยาบาลกองทัพบกส่วนภูมิภาคทั้ง 4 พื้นที่กองทัพภาค จำนวน 36 แห่ง เพื่อให้เจ้าหน้าที่พยาธิวิทยาของโรงพยาบาลตอบเกี่ยวกับการบริจาคโลหิตของพลทหารกองประจำการในปี 2553 และจำนวนพลทหารที่ตรวจพบว่ามีโรคติดต่อทางโลหิต คำนวณหาความชุกของโรคติดต่อทางโลหิต

ผลการศึกษา : มีโรงพยาบาลที่ตอบแบบสอบถามเรื่องการบริจาคโลหิตในพลทหารจำนวน 12 แห่ง รวมพลทหารที่มาบริจาคโลหิต 7,564 นาย ผ่านการคัดกรองสามารถบริจาคโลหิตได้ 6,391 นาย มี ผู้ไม่ผ่านการคัดกรอง 1,173 นาย (15.51%) มีโรงพยาบาลที่รายงานโรคติดเชื้อทางโลหิต 8 แห่ง ในจำนวนผู้ที่บริจาคโลหิตได้ 5,593 นาย มีผู้ติดเชื้อโรคติดต่อทางโลหิต 265 นาย (4.74%) ความชุกของโรคติดเชื้อที่ติดต่อทางโลหิตที่สูงที่สุดคือ ไวรัสตับอักเสบบี (3.63%) รองลงไปคือ ไวรัสตับอักเสบบีซี (0.57%) เอชไอวี (0.27%) และ ซิฟิลิส (0.27%)

สรุป : การรับบริจาคโลหิตจากพลทหารกองประจำการต้องมีการคัดกรองอย่างเหมาะสม เพื่อให้ได้โลหิตที่ปลอดภัย และลดการทิ้งโลหิตที่ติดเชื้อ โรงพยาบาลที่ไม่มีการตรวจโรคติดเชื้อทางโลหิตควรหาข้อมูลจากหน่วยงานบริการโลหิตในพื้นที่ เพื่อเป็นข้อมูลในการดูแลสุขภาพและเฝ้าระวังโรคติดต่อทางโลหิตของพลทหาร

Key Words : ● Conscript ● Donor ● Transfusion-transmitted disease ● Prevalence ● Army hospital

Abstract no. 67**Distribution of ABO Blood Groups Among Thai Army Conscripts in 2010**

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Background : The distribution of ABO blood groups in Thai population is A 20%, B 35%, O 38%, AB 7%, which is useful for blood bank in case of emergency situation and blood component preparation. Thai Army conscripts are important blood donors. There are 2 groups of conscripts, i.e. May and November group, enter to works in the army. All of them has been tested for HIV infection since 1989 and also ABO blood groups. There are around 60,000 conscripts who enter the Royal Thai Army each year.

Objective : To study the distribution of ABO blood groups among Thai Army Conscripts in 4 army regions in 2010.

Methodology : Data collection of ABO blood groups among Thai army conscripts in 2010 was done by 36 army hospitals outside Bangkok and Blood Bank Department of the Army Institute of Pathology. The calculations for percentages of ABO blood groups in each army regions and the total of them were done. The results of blood groups were compared among army regions.

Results : The data of ABO blood groups of 48,686 army conscripts, or 81.1% of total, were obtained. The distribution of ABO blood groups in percentages in each army regions are: First Army Region, A 20.4%, B 35.4%, O 36.4%, AB 7.8% (N = 26,484); Second Army Region, A 19.8%, B 36.9%, O 35.1%, AB 8.2% (N = 9,329); Third Army Region, A 20.1%, B 32.4%, O 42.1%, AB 5.5% (N = 8,282); and Fourth Army Region, A 21.2%, B 32.9%, O 38.9%, AB 7.0% (N = 4,591). For the total conscripts, the distribution of ABO blood groups is: A 20.3%, B 34.9%, O 37.4%, AB 7.4% (N = 48,686).

Conclusion : The distributions of ABO blood groups among Thai army conscripts in 4 army regions are somewhat different, especially B group is the highest in the Second Army Region, but the distribution of the total conscripts is similar to the general population of Thailand.

Key Words : ● *Distribution* ● *ABO blood groups* ● *Army conscripts* ● *Army regions*

Abstract no. 68

Learning Achievement of the Second Year Medical Cadet and Medical Student Class 35, Phramongkutklao College of Medicine's Doctor of Medicine Program 2008

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Background : The 2nd year medical cadets (MC) and medical students (MS) have to adapt themselves from being civilian to being more discipline in military environment and study in new curriculum (Phramongkutklao College of Medicine's Doctor of Medicine program 2008).

Objective : To assess learning achievement and its associated factors of the 2nd year MC and MS Class 35, Phramongkutklao College of Medicine.

Methodology : Descriptive study was conducted. Data were collected from student transcripts and academic results of each subject in academic year 2010.

Results : In academic year 2010, 98 MC and MS Class 35 enrolled in the 2nd year which consisted of 20 male MC, 38 male MS and 40 female MS. Overall, the 2nd year cumulative grade point average (GPA) was 2.79 ± 0.34 . Female MS had 1st year GPA and cumulative GPA at the 2nd year significantly higher than those of male MS but no significant was demonstrated when compared to male MC. Determining by status, MC were found to have higher 1st year GPA, 2nd year GPA, 2nd year cumulative GPA and GPA at the end of both semesters than those of MS but there were no statistically significant difference. Comparison of GPA between two semesters, GPA of male MS was not statistically significant lower than those of female MS and male MC. Overall, however, GPA at the end of the 2nd semester was significantly higher than that of the 1st semester. It was also demonstrated that in the 2nd semester there were higher average score, minimum score and maximum score and fewer students who did not pass examination and had reexamination in each subject than those of the 1st semester. Considering extra activities, the number of activities which mostly were activities that aided in adaptation was substantial lower in the 2nd semester than in the 1st semester.

Conclusion : Female students had higher learning achievement than male students whereas being MC or MS did not affect learning achievement. The learning achievement of 2nd semester was better than that of the 1st semester. Factor that found to be associated with this outcome was the adaptation of students to military environment.

Key Words : ● *Learning achievement* ● *Doctor of mmedicine program*

บทคัดย่อที่ 69

การศึกษาคุณภาพชีวิตของผู้ป่วยโรคไตเรื้อรังระยะสุดท้ายที่ได้รับการรักษาด้วยวิธีการจัดของเสียโดยวิธีการฟอกเลือดด้วยเครื่องไตเทียม เปรียบเทียบกับการจัดของเสียทางเยื่อช่องท้องชนิดต่อเนื่อง ในโรงพยาบาลพระนครศรีอยุธยา จังหวัดพระนครศรีอยุธยา

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³แผนกอายุรศาสตร์โรคไต กองอายุรกรรม โรงพยาบาลพระมงกุฎเกล้า ⁴นักเรียนแพทย์ทหาร วิทยาลัยแพทยศาสตร์พระมงกุฎเกล้า

ความเป็นมา : โรคไตวายเรื้อรัง เป็นปัญหาสาธารณสุขที่สำคัญของประเทศต่างๆ ทั่วโลก รวมทั้งในประเทศไทย และมีอัตราเพิ่มขึ้นทุกปี ซึ่งโรคดังกล่าวส่งผลทำให้ระบบต่างๆ ของร่างกายทำงานผิดปกติ ส่งผลกระทบต่อคุณภาพชีวิตของผู้ป่วย โดยการรักษาผู้ป่วยโรคนี้มีหลายวิธี ได้แก่ การจัดของเสียด้วยการฟอกเลือดด้วยเครื่องไตเทียม (hemodialysis) การจัดของเสียทางเยื่อช่องท้องชนิดต่อเนื่อง (continuous ambulatory peritoneal dialysis, CAPD) และการปลูกถ่ายไต (renal transplantation) ซึ่งถือว่าการปลูกถ่ายไตเป็นวิธีการรักษาไตวายเรื้อรังระยะสุดท้ายที่ได้ผลดีที่สุด แต่ก็มีปัญหาและข้อจำกัดมาก ดังนั้นวิธีการรักษาโดยการบำบัดทดแทนไตจึงเป็นที่นิยมในปัจจุบัน โดยมุ่งหวังมีค่าใช้จ่ายเพิ่มอัตรการรอดชีวิต เท่านั้น แต่ผู้ป่วยต้องมีคุณภาพชีวิตที่ดีขึ้นด้วย

วัตถุประสงค์ : เพื่อศึกษาคุณภาพชีวิตของผู้ป่วยโรคไตเรื้อรังระยะสุดท้ายที่ได้รับการรักษา ด้วยวิธีการฟอกเลือดด้วยเครื่องไตเทียม เปรียบเทียบกับการจัดของเสียทางเยื่อช่องท้องชนิดต่อเนื่องในโรงพยาบาลพระนครศรีอยุธยา จังหวัดพระนครศรีอยุธยา

รูปแบบการวิจัย : เป็นการวิจัยเชิงสำรวจ โดยใช้ข้อมูลเชิงปริมาณ (quantitative data) จากการตอบแบบสอบถามข้อมูลทั่วไป แบบวัดคุณภาพชีวิตทั่วไป และแบบวัดคุณภาพชีวิตผู้ป่วยโรคไต ร่วมกับการใช้ข้อมูลเชิงคุณภาพ (qualitative data) จากการสัมภาษณ์เชิงลึก (In-depth interview)

วิธีการวิจัย : ใช้แบบวัดคุณภาพชีวิตผู้ป่วยโรคไต (KDQOL-SF™) และใช้การสัมภาษณ์แบบเจาะลึกเกี่ยวกับคุณภาพชีวิตในด้านร่างกาย อารมณ์ จิตใจ สังคม เศรษฐกิจ และครอบครัว ในผู้ป่วยโรคไตเรื้อรังระยะสุดท้ายที่ได้รับการรักษา ด้วยวิธีการฟอกเลือดด้วยเครื่องไตเทียม เปรียบเทียบกับการจัดของเสียทางเยื่อช่องท้องชนิดต่อเนื่องในโรงพยาบาลพระนครศรีอยุธยา จังหวัดพระนครศรีอยุธยา

ผลการวิจัย : การศึกษาวิจัยครั้งนี้มีผู้เข้าร่วมงานวิจัยทั้งสิ้น 128 คน ซึ่งแบ่งเป็น 2 กลุ่ม ได้แก่ ผู้ป่วยที่ล้างไตด้วยการฟอกเลือดจำนวน 82 คน ส่วนใหญ่เป็นเพศหญิง อายุเฉลี่ย 56 ± 17 ปี และผู้ป่วยที่ล้างไตทางช่องท้องจำนวน 46 คน ส่วนใหญ่เป็นเพศชาย อายุเฉลี่ย 56 ± 12 ปี โดยในกลุ่มที่ล้างไตด้วยการฟอกเลือดมีระดับการศึกษา อาชีพและรายได้สูงกว่าอย่างมีนัยสำคัญ (p-value 0.008, 0.012 และ <0.001 ตามลำดับ) และผู้ป่วยที่ล้างไตทางช่องท้องมีการออกกำลังกายน้อยกว่าอย่างมีนัยสำคัญ (p-value 0.045) โดยผู้ป่วยทั้ง 2 กลุ่มส่วนใหญ่มีโรคประจำตัวอื่นนอกจากโรคไต ที่พบมากที่สุด คือ โรคเบาหวาน จากการวิจัยเชิงสำรวจ โดยใช้ข้อมูลเชิงปริมาณ (quantitative data) พบว่าการรักษาโรคไตในผู้ป่วยทั้ง 2 กลุ่มนั้นส่งผลทำให้คุณภาพชีวิตลดลง โดยด้านที่ได้รับผลกระทบมากที่สุด คือ บทบาทที่ถูกจำกัดเนื่องจากสุขภาพทางกาย ซึ่งกลุ่มที่ล้างไตด้วยการฟอกเลือดมีมากกว่า แต่ไม่แตกต่างกันอย่างมีนัยสำคัญทางสถิติในผู้ป่วยทั้ง 2 กลุ่ม ในขณะที่กลุ่มที่ล้างไตทางช่องท้องมีคุณภาพชีวิตด้านปฏิสัมพันธ์ทางสังคมและสุขภาพจิตทั่วไปดีกว่าอย่างมีนัยสำคัญทางสถิติ (p-value 0.021, 0.023 ตามลำดับ) แต่มี

สถานภาพการทำงานน้อยกว่ากลุ่มที่ล้างไตด้วยการฟอกเลือด อย่างมีนัยสำคัญทางสถิติ (p-value 0.005)

ผลการวิจัยเชิงคุณภาพ ผู้ป่วยส่วนมากไม่ทราบสาเหตุของการเป็นโรคไตเรื้อรังระยะสุดท้าย และผู้ป่วยที่ได้รับการรักษา ด้วยวิธีการฟอกเลือดด้วยเครื่องไตเทียม ส่วนมากมีอาการอ่อนเพลียหลังฟอกเลือดเสร็จ อาการอื่นที่พบบ่อย เช่น ตะคริว ส่วนมากมีความท้อแท้ ความกลัว ในช่วงแรกที่ฟอกเลือด แต่พอฟอกเลือดไปนานๆ ก็เริ่มปรับตัวและทำได้ ส่วนมากผู้ดูแลจะต้องเสียเวลารับ-ส่งผู้ป่วย แต่ผู้ป่วยทุกคนมีครอบครัวให้กำลังใจและสนับสนุนดี ส่วนมากไม่ได้ออกไปเข้าสังคมอย่างคนปกติ ทั้งจากสุขภาพร่างกายและการที่ต้องมาล้างไตบ่อยๆ ส่วนมากบอกว่ามีค่าใช้จ่ายสูง มีรายได้ไม่เพียงพอ มีปัญหาทางการเงิน ส่วนผู้ป่วยที่ได้รับการรักษา ด้วยวิธีการขจัดของเสียทางเยื่อช่องท้องชนิดต่อเนื่อง ส่วนมากรู้สึกร่างกายแข็งแรงขึ้น สุขภาพดีขึ้น ส่วนมากไม่ค่อยมีความกังวล สามารถทำงานได้ ส่วนมากไม่มีผลกระทบต่อครอบครัว ครอบครัวคอยช่วยเหลือ เป็นกำลังใจ ผู้ป่วยหลายคนมีคนในครอบครัวเป็นคนล้างท้องให้ ส่วนมากเข้าสังคมได้เหมือนคนทั่วไป เพียงแต่ต้องจำกัดเวลา ให้สามารถล้างท้องตรงตามเวลาได้ ส่วนมากไม่มีปัญหาเรื่องค่าใช้จ่ายในการล้างท้อง เนื่องจากทุกคนสามารถใช้สิทธิเบิกได้ เสียค่าส่วนเกินเพียงเล็กน้อย

สรุปผล : ผู้ป่วยโรคไตเรื้อรังระยะสุดท้ายทั้งกลุ่มที่ล้างไตด้วยการฟอกเลือดและกลุ่มที่ล้างไตทางช่องท้อง การรักษาดังกล่าวส่งผลให้มีคุณภาพชีวิตที่ลดลงทั้ง 2 กลุ่ม แต่ส่วนใหญ่ไม่แตกต่างกัน จะมีคุณภาพชีวิตเพียงบางด้านที่แตกต่างกันอย่างชัดเจนใน 2 กลุ่มนี้ ซึ่งกลุ่มที่ล้างไตด้วยการฟอกเลือดมีสถานภาพการทำงานดีกว่า แต่การรักษาที่ส่งผลต่อสุขภาพทางร่างกาย ปฏิสัมพันธ์ทางสังคม อารมณ์และจิตใจ มากกว่าด้วยเช่นกัน แต่อย่างไรก็ตามผู้ป่วยแต่ละคนนั้นอาจมีตัวเลือกในการรักษาไม่เหมือนกัน บางคนมีตัวเลือกในการรักษาหลายแบบ แต่ในขณะที่บางคนไม่สามารถเลือกได้จำเป็นต้องรับการรักษาที่กำหนดเท่านั้น ดังนั้นจึงต้องดูความจำเป็นในด้านอื่นๆ ด้วย การเลือกรักษาแบบที่ผู้ป่วยต้องการ เหมาะสมกับตัวผู้ป่วย ผู้ป่วยพร้อมและยินดีที่จะรักษาด้วยวิธีนั้น จึงเป็นส่วนสำคัญที่จะทำให้คุณภาพชีวิตของผู้ป่วยดีขึ้น

Key Words : ● คุณภาพชีวิต ● โรคไตเรื้อรังระยะสุดท้าย ● เครื่องไตเทียม

บทคัดย่อที่ 70

การศึกษาความชุก ปัจจัยที่เกี่ยวข้องของภาวะนอนไม่หลับ และพฤติกรรม

การใช้ยานอนหลับในผู้สูงอายุที่มีอายุตั้งแต่ 60 ปีขึ้นไป ในชุมชนวัดอินทาราม ตำบลหัวรอ อำเภอพระนครศรีอยุธยา จังหวัดพระนครศรีอยุธยา

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หลักการและเหตุผล : ในปัจจุบันภาวะนอนไม่หลับเป็นภาวะที่พบบ่อยในผู้สูงอายุและคนส่วนใหญ่มักมองว่าเป็นเรื่องปกติที่สามารถเกิดขึ้นได้ ซึ่งในความเป็นจริงแล้วมีปัจจัยที่เกี่ยวข้องกับภาวะนอนไม่หลับในผู้สูงอายุหลายปัจจัยซึ่งสามารถแก้ไขได้ และเมื่อปัจจัยเหล่านี้ได้รับการแก้ไขแล้วยังส่งผลให้ภาวะการนอนหลับในผู้สูงอายุดีขึ้นลดผลกระทบจากภาวะนอนไม่หลับทั้งทางด้านสุขภาพจิตใจครอบครัวสังคมและเศรษฐกิจ นอกจากนี้พฤติกรรมการใช้ยานอนหลับในผู้สูงอายุยังไม่มีการศึกษาอย่างชัดเจน ซึ่งการใช้ยานอนหลับนี้อาจส่งผลดีหรือผลเสียให้แก่ผู้ใช้ซึ่งสามารถนำมาศึกษาเปรียบเทียบและหาแนวทางแก้ไขต่อไป

วัตถุประสงค์ : เพื่อศึกษาความชุก ปัจจัยที่เกี่ยวข้อง ของภาวะนอนไม่หลับ และเพื่อให้เห็นทราบถึงพฤติกรรมการใช้ยานอนหลับในผู้สูงอายุที่มีอายุตั้งแต่ 60 ปีขึ้นไปในชุมชนวัดอินทาราม ตำบลหัวรอ อำเภอพระนครศรีอยุธยา จังหวัดพระนครศรีอยุธยา

รูปแบบการวิจัย : Descriptive and analytic cross sectional study

สถานที่ศึกษา : ชุมชนวัดอินทาราม ตำบลหัวรอ อำเภอพระนครศรีอยุธยา จังหวัดพระนครศรีอยุธยา

ประชากรและกลุ่มตัวอย่าง : ประชากรที่มีอายุตั้งแต่ 60 ปีขึ้นไป

วิธีการวิจัย : การทำแบบสอบถามเพื่อศึกษาหาความชุก ปัจจัยที่เกี่ยวข้องของภาวะนอนไม่หลับและพฤติกรรมการใช้ยานอนหลับในผู้สูงอายุที่มีอายุตั้งแต่ 60 ปีขึ้นไปในชุมชนวัดอินทาราม ตำบลหัวรอ อำเภอพระนครศรีอยุธยา จังหวัดพระนครศรีอยุธยา

ผลการวิจัย : ประชากรที่เข้าร่วมโครงการวิจัยมีทั้งสิ้น 378 คน เป็นเพศชาย 132 คน (ร้อยละ 34.92) เป็นเพศหญิง 246 คน (ร้อยละ 65.08) จากผลการศึกษาพบว่าผู้สูงอายุที่มีคุณภาพการนอนหลับไม่ดีเป็นจำนวนทั้งสิ้น 197 คน (ร้อยละ 52.12) เป็นเพศชายร้อยละ 42.42 เป็นเพศหญิงร้อยละ 57.32 ปัจจัยที่มีผลต่อภาวะคุณภาพการนอนหลับไม่ดีอย่างมีนัยสำคัญทางสถิติคือ การใช้ยานอนหลับ มีบ้านพักอาศัยริมแม่น้ำ การดื่มสุรา ระยะเวลาในการดูทีวีก่อนเข้านอนมากกว่า 1 ชั่วโมง ดูทีวีประเภทละครก่อนนอน ผู้มีความเสี่ยงในภาวะซึมเศร้าและการสวดมนต์ก่อนนอน การศึกษาพฤติกรรมการใช้ยานอนหลับในประชากรที่คุณภาพการนอนหลับไม่ดีพบผู้ใช้ยาช่วยในการนอนหลับ 93 คน (ร้อยละ 47.21) โดยมีผู้ใช้ยานอนหลับ 58 คน (ร้อยละ 62.4) มีผู้ที่คิดว่าตนเองติดยานอนหลับ 18 คน (ร้อยละ 19.4) และในช่วง 1 เดือนที่ผ่านมาผู้ใช้ยาช่วยในการนอนหลับทุกวันร้อยละ 25.8 โดยใช้เป็นยานอนหลับถึงร้อยละ 83.33 สถานที่ที่ได้รับยาช่วยในการนอนหลับมากที่สุดคือสถานีนอนมาลัย และโรงพยาบาลคิดเป็นร้อยละ 46.2 และ 37.6 ตามลำดับผลกระทบจากการใช้ยาช่วยให้นอนหลับพบว่าระหว่างการเข้ายามีประชากรที่มักได้รับอุบัติเหตุเล็กๆ น้อยๆ ร้อยละ 32.26 ผลกระทบในวันรุ่งขึ้นพบว่าร้อยละ 43.01 ไม่มีอาการผิดปกติใดๆ ร้อยละ 38.71 มีอาการง่วงนอนระหว่างวันร้อยละ 25.81 มีประสิทธิภาพการทำงานลดลงและร้อยละ 16.13 มีการตัดสินใจช้าและแย่งและเมื่อไม่ได้รับประทานพบว่าร้อยละ 44.09 ไม่มีอาการถอนยาใดๆ ร้อยละ 21.51 มีอาการหงุดหงิดง่ายและร้อยละ

21.51 มีอาการฝันร้ายโดยในประชากรที่มีปัญหาเรื่องการนอนหลับมักได้รับคำแนะนำต่างๆ จากสถานเฝ้าหมายและโรงพยาบาล ร้อยละ 24.79 และร้อยละ 21.49 ตามลำดับ ในขณะที่กว่าร้อยละ 23.97 ไม่ได้รับคำแนะนำจากที่ใด

วิจารณ์: ปัญหาการนอนไม่หลับในผู้สูงอายุรวมทั้งพฤติกรรมการใช้ยานอนหลับเป็นปัญหาที่สังคมควรตระหนักถึงเนื่องจาก เป็นปัญหาที่พบได้บ่อยในผู้สูงอายุ แต่คนทั่วไปมักไม่ให้ความสนใจและมองเป็นเรื่องปกติที่เกิดขึ้นได้ในผู้สูงอายุ จากการศึกษา ทำให้เห็นว่ายังมีปัจจัยต่างๆ ที่มีความสัมพันธ์กับการนอนไม่หลับในผู้สูงอายุที่สามารถแก้ไขได้เช่น ผู้ที่มีความเสี่ยงต่อภาวะซึมเศร้า การดื่มสุรา และการปรับเปลี่ยนพฤติกรรมการใช้โทรศัพท์ ซึ่งจะทำให้ผู้สูงอายุหลับง่ายขึ้น นอกจากนี้ยังแสดงให้เห็นว่าการ ใช้ยานอนหลับนั้นไม่ได้ส่งผลดีต่อการรักษาภาวะนอนไม่หลับเสมอไป เนื่องจากการใช้ยานอนหลับก็ทำให้เกิดการนอนไม่หลับ ได้เช่นกัน ซึ่งเป็นเรื่องที่แตกต่างกันกับเรื่องทั่วไปที่คนส่วนใหญ่เข้าใจ ดังนั้นการที่จะใช้ยานอนหลับในการรักษาภาวะนอนไม่หลับต้อง ใ้ไตร่ตรองอย่างละเอียดถี่ถ้วนว่าก่อให้เกิดประโยชน์หรือโทษมากน้อยเพียงใด รวมทั้งการสั่งใช้ยานอนหลับต้องอยู่ในวิจาร์ณญาณ ของแพทย์เท่านั้น ซึ่งแพทย์ที่เป็นผู้สั่งยาต้องมีความละเอียดรอบคอบและคิดถึงความเหมาะสมในด้านต่างๆ ด้วย นอกจากนี้ผู้สูง อายุส่วนใหญ่ยังมีความรู้ความเข้าใจเกี่ยวกับการใช้ยานอนหลับค่อนข้างน้อย เนื่องจากมักไม่ได้รับคำแนะนำเกี่ยวกับการใช้ยา นอนหลับว่ามีผลดีผลเสียอย่างไร ดังนั้นจึงควรมีการให้ความรู้แก่ผู้สูงอายุในการใช้ยานอนหลับอย่างถูกวิธีเพื่อลดผลกระทบต่างๆ ที่อาจจะเกิดขึ้นจากการใช้ยานอนหลับมากเกินไปจนเกิดความจำเป็น และถ้าไม่จำเป็นก็ไม่ควรใช้ยานอนหลับ เนื่องจากยังมีวิธีอีกหลาย วิธีที่สามารถช่วยรักษาภาวะการนอนไม่หลับได้ เช่น การฝึกหายใจ หัวเราะบำบัด การออกกำลังกาย เป็นต้น

Key Words : ● ภาวะนอนไม่หลับ ● ยานอนหลับ

Abstract no. 71**Immediate Renal Effects of Parecoxib in Surgical Patients :
A Randomized Controlled Study****Somratai Vadcharavivad¹, Phanphilas Hutasewe², Sahaphola Anannamcharoen³,****Thanainit Chotanaphuti⁴ and Wanchai Nakaresisoon⁴**¹*Department of Pharmacy Practice, Faculty of Pharmaceutical Sciences, Chulalongkorn University;*²*Department of Pharmacy;* ³*Department of Surgery;* ⁴*Department of Orthopaedics, Phramongkutklao Hospital*

Background : Parecoxib is an injectable cyclooxygenase-2 (COX-2) selective inhibitors that have been used for controlling post-operative pain. Parecoxib provides opioid-sparing effect, analgesic efficacy and tolerability. However, it had been reported that COX-2 selective inhibitors are also associated with adverse renal effects. It is known that non-steroidal anti-inflammatory drugs can cause renal unwanted effects such as hemodynamically-mediated acute renal failure, acute interstitial nephritis, nephrotic syndrome, fluid and electrolyte complications, and chronic nephropathy.

Objective : To evaluate immediate post-operative effects of parecoxib on renal function in total knee arthroplasty (TKA) and total hip arthroplasty (THA) patients.

Methodology : This was a randomized, active controlled study of patients who received either TKA or THA at Phramongkutklao Hospital. Eligible participants were those whose serum creatinine was less than or equal to 1.2 mg/dL. The patients were randomly assigned to receive either 40 mg parecoxib at 4-hour after surgical wound closure or 3 mg morphine at 24-hour after spinal block with morphine as a standard of care. The primary outcome was difference between 24-hour measured creatinine clearance. Urine output, urine sodium and potassium concentrations were also followed.

Results : Of a total of 101 patients (60.53±8.00 years old), 48 and 53 patients were in parecoxib group and morphine group, respectively. 24-hour creatinine clearance in parecoxib group and morphine group were 85.04 and 84.50 mL/min, respectively (p=0.46). However, significant differences of fractional excretion of sodium, urine sodium and potassium concentrations at 2-hour after drug administration were observed between groups. One TKA patient developed stage I acute kidney injury. Her serum creatinine went back to her baseline at 24 hours after parecoxib discontinuation.

Conclusion : No significant difference of creatinine clearance at 24 hours post-operation was found between patients who received parecoxib injection and those who received a standard regimen.

Key Words : ● *Parecoxib* ● *COX-2* ● *Pain* ● *Morphine* ● *Kidney injury*

Abstract no. 72**Recurrent Pauci-immune Glomerulonephritis in Children During Early Post Kidney Transplantation Period****Adisorn Lumpaopong¹, Satit Siriboonrid², Kamol Ruengthong³, Vijitr Boonpucknavig⁴, Prapaipim Thirakhupt¹, Konggrapun Srisuwan¹, Nattaporn Hongsawong¹**

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Pauci-immune glomerulonephritis (GN) has been demonstrated as an etiology of end stage renal disease in children however recurrent disease after kidney transplantation (TX) is rare. In present study, we report a child who developed recurrent pauci-immune GN during early post kidney TX period. The patient was a 13 year-old girl who had underlying of pauci-immune GN from anti-MPO antibody underwent kidney TX from deceased donor. The induction regimen consisted of thymoglobulin, mycophenolate and methylprednisolone. After TX, she developed delayed graft function which required dialysis and tacrolimus was not initiated. The lab investigation revealed BUN 129 mg/dL, creatinine 6.3 mg/dL, p-ANCA - positive, and anti-MPO antibody - positive. Renal biopsy was done on day 10 after TX which demonstrated increase of matrix and cell in the mesangium and focal proliferation of parietal epithelial cell of Bowman's capsule. The immunofluorescence study revealed no deposits of immune complex and immunohistochemical study for C4d showed negative result. After she was treated with intravenous pulse methylprednisolone, cyclosporamide and plasmapheresis, her serum creatinine decreased to 1.2 mg/dL with increased urine output. Her current immunosuppressive regimen includes mycophenolate, prednisolone and monthly pulse cyclophosphamide. In conclusion, we report a rare case of kidney TX children who develop recurrent pauci-immune GN during early TX period. Investigation for recurrent pauci-immune GN should be considered in the recipient who develops delayed graft function.

Key Words : ● Pauci-immune glomerulonephritis ● Kidney Transplantation

Abstract no. 73**Renal Dysfunction During Dengue Infection in Kidney Transplant Children**

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Dengue infection (DEN) is the common tropical infection in South East Asia. Immune responsiveness and cytokine production are recognized as the pathogenesis of DEN. Immunosuppressive drugs using in kidney transplantation (KTx) also have the inhibitory effect on immune system and cytokine production that might decrease the severity of DEN. In present study, we would like to review the case series of DEN in KTx children. During the year 2000-2011, we have 3 KTx cases who had DEN. Case I was a 14 years old boy who underwent KTx for 5 years and maintenance immunosuppressive drugs included CSA, AZA and Pred. He developed sudden onset of fever, diarrhea and malaise. Hepatomegaly, thrombocytopenia and capillary leakage syndrome were demonstrated during fever declined. The lab investigation revealed hyponatremia, respiratory alkalosis, metabolic acidosis, microscopic hematuria and nephrotic range proteinuria, 8.7 g/day. The serology for DEN showed secondary DEN serotype III. Abnormal electrolytes, acid-base status and proteinuria were resolved during follow up period. Case II was a 15 years old boy who had KTX for 7 years. His immunosuppressive drugs included TAC, MMF and Pred. He was admitted due to high grade fever. During fever declined, hemoconcentration, leucopenia and thrombocytopenia were demonstrated. His serum creatinine (SCr) elevated from 1.4 to 1.8 mg/dL and nephrotic range proteinuria with microscopic hematuria were shown. The results for dengue serology were positive for NS1 antigen with primary DEN serotype III. His sCr returned to baseline level, proteinuria and microscopic hematuria resolved after infection subsided. Case III was a 14 years old boy with stable KTX for 1 year. His immunosuppressive medicine consisted of CSA, MMF and Pred. He was admitted due to high grade fever with chill and lab investigation revealed leucopenia with lymphocyte predominately. sCr elevated from 1.7 to 2.0 mg/dL and urine 24 hours for protein was 3.6 g/day. The results of NS1 antigen, dengue PCR and dengue titer showed primary DEN serotype II. After infection resolved, his sCr decreased to baseline level and proteinuria decreased. In conclusion, we report case series of DEN in KTx children. Renal dysfunction, proteinuria and hematuria were demonstrated in our study. The severity of DEN might corresponded with primary or secondary immune response however cytokine inhibition from immunosuppressive drugs might decreased severity of DEN. Careful monitoring renal function should be considered in kidney transplant children with DEN.

Key Words : ● *Dengue infection* ● *Kidney transplant* ● *Renal dysfunction*

Abstract no. 74**Effectiveness and Safety of Continuous Intravenous Furosemide Infusion to Control Fluid Balance in Critically Ill Children with Acute Lung Injury and Ards****Sakrasae S, Staworn D, Chuengchitraks S, Sirithangkul S and Laohapand C.***Division of Pulmonary and Critical Care, Department of Pediatrics, Phramongkutklo Hospital*

Background : Controlling fluid balance in adult patients with acute lung injury (ALI) has been demonstrated to associate with a trend toward shorter duration of mechanical ventilation and length of stay in the intensive care units. There has been no published report to demonstrate the effectiveness and safety of continuous intravenous furosemide infusion in children with ALI and ARDS.

Objectives : To determine the effectiveness and safety of continuous intravenous furosemide infusion to control fluid balance in critically ill children with ALI and acute respiratory distress syndrome (ARDS).

Methods : This prospective descriptive study was conducted between April 1st, 2010 to March 31st, 2011 at Phramongkutklo Hospital. Children under 15 years of age who were diagnosed with ALI/ ARDS at pediatric intensive care unit (PICU) of Phramongkutklo Hospital were enrolled into the study. Continuous intravenous furosemide infusion was started and titrated every 4 hours to achieve a net negative fluid balance. The following data were recorded: demographic data, changes in ventilator settings and gas-exchange parameters, vital signs and serum electrolyte were collected for at least 72 hrs.

Results : Nine patients were enrolled into this study. Two patients were excluded due to renal failure required renal replacement therapy. Seven patients were included and analyzed. There were 2 females and 5 males, aged between 2 to 23 months. The average PRISM score (median) is 9. The average duration (median) to achieve the net negative balance after starting furosemide infusion was 19 hours. There was one patient who developed hypotension required fluid bolus. Three patients developed mild electrolyte imbalance and one patient developed severe electrolyte imbalance. The autopsy on one of the patient who died showed mucous plug in the distal end of trachea and proximal bronchi (mortality rate 14.28%). There was a significant improvement of oxygenation at the end of 72 hours period (PF at 72 hr showed mean change in PF ratio: 60.4).

Conclusion : Use of continuous intravenous furosemide infusion is effective in controlling fluid balance in critically ill children with ALI and ARDS. Closed monitoring of blood pressure and serum electrolyte is warranted.

Key Words : ● *Furosemide* ● *Critically ill children* ● *Acute lung injury* ● *ARDS*
● *Hookworm* ● *Intestinal parasitic infection* ● *Geographic information systems*

Abstract no. 75**Kinetics of Antibodies Against Dengue Viruses after Primary Infection and Demonstrating that of Transplacental Transfer**

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Introduction : Dengue illness can be primary or secondary infection. The decay of antibody in the primary dengue infected patient's circulation has not been well established.

Objective : To study the kinetics of dengue antibodies in patients with primary dengue infections.

Materials and Methods : Of 449 children who were hospitalized at Phramongkutklao Hospital during 2002-2004, presented with fever of non-specific source of infection and had preliminary diagnosis of dengue illness, 301 were enrolled. Blood antibodies to dengue viruses by Electroimmunoassay and Hemagglutination-Inhibition Assay (HI) at AFRIMS were used to determine whether the child had primary/secondary dengue infection. Cases of primary dengue infections were aimed to be followed for their antibody persistence every 3 months or until the absence of antibody.

Results : Dengue illness was 83% (250 cases) and 17% were not dengue. Thirty-four (13.6%) and 216 (86.4%) cases were primary and secondary dengue infections respectively. Eight (24%) cases with primary infections gave informed consents to give their blood drawn to study the persistence of antibodies to dengue by HI. Their antibodies persisted in 100%, 75%, 62.5%, 50% and 25% by 3, 6, 9, 12 and 15 months respectively before withdrawing consents. The disappearance time by calculation was 19.7 months. In contrast to our previous study, most of the transplacentally transferred dengue antibodies disappeared before infants aged 12 months.

Conclusion: The antibodies to dengue viruses in patients with primary infection can persist longer than those of transplacentally transferred antibodies. These results will give an insight in consideration of appropriate time for future dengue vaccination.

Key Words : ● *Dengue Viruses* ● *Dengue antibody*

Abstract no. 76**Evaluation of QuickVue Influenza A+B Test for Rapid Screening of Pandemic Influenza A/H1N1 -2009 Viruses from Patients with Flu Like Syndrome of Phramongkutklao Hospital during 2009-2010**

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 Atthaya Ruangpung¹, Weera Boonsom¹, Krongkan Saipin¹, Kamonwan Siriwathanakul¹,
 Sutchana Tabprasit¹, Paijit Permpool³, Saowapap Kasinant², Thanatporn Samasiri³,
 Rudiwilai Samakoses³, Chonticha Klungthong², Richard G Jarman², Robert V Gibbon²,
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Background : A novel Influenza A/H1N1-2009 spread to most of the world's population causing significant morbidity, mortality including economic problems. Accurate and rapid diagnosis of Pandemic Influenza A/H1N1 virus infection is important for the prevention and control of influenza epidemics and the timely initiation of antiviral treatment.

Objectives : To evaluate QuickVue Influenza A+B test and compare with real-time reverse transcriptase polymerase chain reaction (RT-PCR), gold standard, for its ability to detect Influenza A/H1N1 -2009 viruses.

Methods : Nasal swabs were collected from the patients with Flu like syndrome of Phramongkutklao Hospital between June 2009 to December 2010. Specimens were tested using QuickVue Influenza A+B test and RT-PCR.

Results : The study was conducted on 300 clinical nasal specimens. Of 300 specimens 61 (20.3%) were positive for pandemic Influenza A/H1N1 -2009. Sensitivity and specificity of QuickVue Influenza A+B test kit for H1N1 2009 were 29.5% and 99.5%, respectively. Positive predictive value was 94.7% and negative predictive value was 82.2%.

Conclusions : This study demonstrates that QuickVue Influenza A+B test showed low sensitivity but high specificity during a period of high Influenza A/H1N1-2009. Thus, we should consider false negative results of QuickVue Influenza A+B rapid test for diagnosis and then treatment as well. However, rapid test kits can still be useful in preliminary screening during pandemic situation.

Key Words : ● *Influenza H1N1-2009* ● *QuickVue Influenza A+B Test* ● *Real time Reverse*
 ● *Transcriptase Polymerase Chain Reaction (Real-Time RT-PCR)* ● *Phramongkutklao Hospital*

Abstract no. 77**Prevalence of Carbapenemases *Acinetobacter Baumannii* in Intensive Care Unit in Phramongkutklao Hospital**

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Background : Multidrug-resistant (MDR) *Acinetobacter baumannii* are important nosocomial pathogens especially among intensive-care-units (ICU) patients. The increasing trend of carbapenem resistance in *A.baumannii* worldwide is a concern since it limits drastically the range of therapeutic alternatives.

Objective : To determine the prevalence and antimicrobial pattern of carbapenemases *A. baumannii* in intensive cares in Phramongkutklao hospital.

Study Design : Descriptive study

Material and Methods : A total of 73 non-duplicate clinical isolates of carbapenem-resistant *A. baumannii* in ICU (January 1, to October 31, 2011) were tested for carbapenemases and metallo- β -lactamase (MBL) production by Modified Hodge test and EDTA disk synergy (EDS) respectively. Antimicrobial susceptibility pattern was performed by disc diffusion method according to CLSI and E-test method

Result : The prevalence of carbapenemases *A. baumannii* was 82% and no metallo- β -lactamase (MBL) producing stain were detected. All isolates were resistant to all classes of antimicrobials, while retaining susceptibility to tigecycline (96%) and colistin (100%)

Conclutions : MBL production is not important mechanism of carbapenem resistance in *A. baumannii*. However, genotypic characterization the most widespread of the several carbapenem-hydrolysing class D oxacillinase (CHDL) should have to further study. An understanding of the molecular epidemiology of infection is necessary, in order to better control multidrug-resistant *A. baumannii* (MDR-AB)

Key Words : ● *Acinetobacter baumannii* ● Multidrug-resistant (MDR) ● Carbapenemases
● Metallo- β -lactamase (MBL)

Abstract no. 78**The Effects of Rubber Band Exercise Training with Low Protein Diet on Muscle Mass in Chronic Kidney Disease Patients****Burin Lauhawata, Yupa Chanwigrai¹, Amnart Chaiprasert, Ouppatham Supasyndh***Division of Nephrology; ¹Research Unit, Department of Medicine, Phramongkutklo Hospital*

Background : Chronic kidney disease (CKD) leads to muscle wasting, which may be aggravated by low-protein diets prescribed to delay disease progression. Resistance training is effective to maintain or recover muscle mass and strength. However, it is often difficult to motivate many such patients to undergo exercise training chronically.

Objective : To demonstrate the effect of 12-week resistance exercise by using rubber band on muscle mass in CKD patients stage 3-5 receiving low-protein diet.

Methods : The randomized control trial was conducted in CKD clinic at Phramongkutklo Hospital during June to December 2010. The eligible CKD stage 3-5 participants were asked to restrict low protein diet (0.6-0.8 g/kg/day) and randomly assigned to do only gentle exercise (control group) or plus resistance exercise by using rubber band (treatment group) for 12 weeks. The exercise training was supervised and strictly monitored by sport scientist every four weeks. Dual energy absorptiometry was performed to determine lean body mass. The maximum repetition of rubber band exercise was recorded to demonstrate the muscle strength. Daily energy and protein intake were guided using 3-day food record and normalized protein nitrogen appearance.

Results : There were 28 patients (mean age 67.64 ± 9.67 years) in control group and 26 patients (mean age 65.04 ± 12.68 years) in study group. The average dietary protein intake between control and study group was 0.68 ± 0.17 vs. 0.72 ± 0.26 g/kg body weight and daily energy intake was 20.09 ± 5.81 vs. 21.31 ± 6.62 kcal/kg body weight, respectively. There was statistically significant in mean change of total lean body mass in study group (2.45 ± 3.30 vs. 10.79 ± 3.6 g/kg BW, $p = 0.006$).

Conclusion : Resistance exercise with rubber band is effective in increasing muscle mass in CKD patients with dietary protein restriction.

Key Words : ● Exercise ● Kidney ● Low protein ● Muscle mass

Abstract no. 79**The Efficacy of Senna Glycoside versus Lactulose in the Treatment of Chronic Constipation in Maintenance Hemodialysis Patients****Naetirat Kittiyanyanya, Ouppatham Supasyndh, Bancha Satirapoj, Wanich Piyanirun¹ and Bussabong Noo-la²**

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Background : Chronic constipation is one of the frequent gastrointestinal symptoms in patients with maintenance hemodialysis (MHD). There are several inevitable factors contributed to the symptom and often the patients are more likely to use laxatives.

Objectives : We aimed to compare the effectiveness of senna glycoside and lactulose in treating chronic constipation in MHD patients and to demonstrate the colonic transit time among those.

Methods : The randomized, double blind, cross-over study in MHD patients at Phramongkutklao Hospital was conducted during July to December 2010. The MHD patients with chronic constipation matched to ROME III criteria were eligible and randomized to 2 arms; the senna glycoside (S) and the lactulose (L). The colonic transit time was performed by using radio-opaque marker before and after the study periods. The stool daily charts defined by ROME III criteria were evaluated as the tool during the study.

Results : Twenty-nine of patients per protocol were studied. Sixteen were male (55%) with average age 58.17 ± 12.26 years. Median colonic transit time was 38.4 (16.8-52.8) hours. Only 3 patients were reported having prolonged colonic transit time over 72 hours. There was no difference between the cathartic effect of senna glycoside and lactulose (58.6% vs. 75.9%, $p = 0.403$). The S-group had higher abdominal cramp than the L-group (65.5% vs. 13.8%, $p < 0.001$), while the L- group had higher abdominal bloating than the S- group (93.1% vs. 6.9%, $p < 0.001$). The average doses related with adverse effect was 4.00 ± 1.76 tablets for senna glycoside and 22.8 ± 12 mL for lactulose. No serious drug adverse events were reported.

Conclusions : The present study shows that both laxative agents are effective in treatment of constipation in MHD patient. However, each of them may have different gastrointestinal adverse effects.

Key Words : ● Constipation ● Hemodialysis ● Senna ● Lactulose

Abstract no. 80**Effect of Suboptimal Regular Blood Transfusion on Severity of Osteopenia and Osteoporosis in Adult Patients with β -thalassemia/HbE Disease at Phramongkutkloa Hospital****Nattakorn Sriwattanawanit¹, Thontanai Numbenjaphol¹ and Kittti Torcharus²**¹*Division of Hematology, Department of Internal Medicine;* ²*Division of Hematology, Department of Pediatrics, Phramongkutkloa Hospital*

Background : Incidence of osteopenia and osteoporosis is increased in thalassemic patients with suboptimal blood transfusion.

Objective : To study the effect of suboptimal regular blood transfusion in adult patients with β -thalassemia/HbE disease on the severity of osteopenia and osteoporosis.

Method: Adult patients with β -thalassemia/HbE disease who had 5-year average hemoglobin (Hb) level < 9 g/dL were enrolled into this cross-sectional retrospective study. Eligible patients were divided into 2 groups; suboptimal regular transfusion (≥ 1 U of PRC in 12 weeks) and suboptimal irregular transfusion (< 1 U of PRC in 12 weeks). Basic characteristics, Hb level, and bone mineral density (BMD) Z-score of lumbar spine of each group were compared.

Results : A total of 52 patients were enrolled into the study. Mean age was 27.94 ± 9.84 years. The BMD Z-score of lumbar spine was significantly correlated with Hb level and sex $P = 0.045$ and 0.024 , $r = 0.279$ and 0.314 , and $95\% \text{ CI} = (-9.72314) - (-9.04609)$ and $(-1.1161) - (-0.08390)$. Interestingly, male patients appeared to develop significantly more osteoporosis than that of female patients $P = 0.03$, $95\% \text{ CI} = 0.248 - 0.932$. The 5-year mean Hb level and mean Z-score of lumbar spine were not significantly different between patients with suboptimal regular and irregular transfusion.

Conclusion : Suboptimal regular blood transfusion can not prevent osteopenia and osteoporosis in adult patients with β -thalassemia/HbE disease.

Key Words : ● Bone mineral density ● Erythropoiesis ● Thalassemia ● Osteoporosis ● Osteopenia

Abstract no. 81**Enteral Supplement with Soy Protein – Isolated Diet Formula Improved Serum Albumin in Malnourished Hemodialysis Patients****Yupa Chanwikrai, Thitipon Chanwangsa¹ and Ouppatham Supasyndh***Phramongkutklo Hospital; ¹Mahidol University*

Introduction : Protein-energy wasting is common adverse consequence of maintenance hemodialysis patients which increased morbidity and mortality. Oral nutrition supplement is known to be the effective therapy to improve nutritional status. However, in Thailand, renal specific diet formula is overpriced.

Objective : To determine the effect of enteral supplement with soy protein - isolated diet formula on serum albumin, potassium and phosphorus in hemodialysis patients.

Methods : A three-months, randomized open- label trial was conducted in 12 hemodialysis patients who had serum albumin between 3.5 - 3.8 mg/dL, without any abnormalities of serum potassium and phosphorus. Blood samples were collected for measurement of serum albumin, potassium and phosphorus. The patients were divided into two groups; group A: receiving 120 g/day of soy protein - isolated diet formula and group B: receiving the standard care. Individual nutrition counseling was provided to both groups by the dietitian. A nutrient intake was evaluated by using the INMUCAL-Nutrients, software program. Blood samples and 3-day food records were evaluated at baseline and the end of the study.

Results : At baseline, there was not found any significant difference of serum albumin, potassium and phosphorus between groups. At the end of study, serum albumin was significantly increased in group A (A: 3.31 ± 0.11 , 3.73 ± 0.39 vs. B: 3.34 ± 0.38 , 3.40 ± 0.74 g/dL, respectively, $p < 0.05$). At the end of study, no significant difference of serum potassium and phosphorus in both group A and B (A: 4.35 ± 0.43 , 4.49 ± 0.33 ; B: 4.14 ± 0.22 , 4.53 ± 0.30 mEq/l, respectively and A: 3.97 ± 0.67 , 4.51 ± 0.56 ; B: 4.18 ± 0.85 , 5.78 ± 1.17 mg / dl, respectively). Dietary protein and energy intake was increased among group A and B at the end of study (A: 1.18 ± 0.37 , 1.42 ± 0.23 ; B: 1.1 ± 0.39 , 1.04 ± 0.08 g/kg/day and A: 24.69 ± 7.00 , 31.81 ± 3.83 ; B: 22.35 ± 3.87 , 25.28 ± 3.32 kcal/kg/day, respectively).

Conclusion : Enteral supplement with soy protein - isolated diet formula contributes to serum albumin increased significantly among hemodialysis patients without statistically significant in serum potassium and phosphorus.

Key Words : ● *Enteral supplement* ● *Soy protein – isolated diet* ● *Albumin* ● *Hemodialysis*

Abstract no. 82**Insulin Resistance in Dialysis Versus Non Dialysis End Stage Renal Disease Patients without Diabetes**

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Objective : Insulin resistance is frequently recognized in uremic patients and is a predictor of cardiovascular mortality in end stage renal disease (ESRD) patients. However, sparse data are available regarding the effects of different methods of renal dialysis on insulin resistance in ESRD without diabetes. The present study was conducted to evaluate the levels of insulin resistance in dialysis versus non dialysis ESRD patients without diabetes.

Material and Method : A cross-sectional study was carried out in 45 non diabetic ESRD patients including continuous ambulatory peritoneal dialysis (CAPD), hemodialysis (HD), and nondialysis ESRD patients. The value of insulin resistance was obtained by homeostasis model assessment (HOMA). Estimation of the glomerular filtration rate (GFR) was obtained by the four-variable Modification of Diet in Renal Disease equation and ESRD was defined when GFR was below 15 ml/min/1.73 m².

Results : Non diabetic ESRD patients were studied: 12 patients on CAPD treatment for 67.4 months, 18 patients on HD treatment for 89.3 months, and 15 patients on conservative treatment. HOMA scores (CAPD 5.4±2.3, HD 6.0±1.9 vs. non dialysis 1.5±0.9, p<0.05) and fasting plasma insulin levels (CAPD 21.9±7.7 μU/mL, HD 19.5±8.4 μU/mL vs. non dialysis 4.4±2.5 μU/mL, p<0.05) of the CAPD and HD groups were significantly higher than the non dialysis ESRD group, with no significant differences observed between CAPD and HD groups. However, fasting plasma glucose was significantly lower in the HD group than the CAPD and non dialysis ESRD groups (CAPD 98.2±10.6 mg/dL, non dialysis 93.0±11.5 mg/dL vs. HD 76.2±7.8 mg/dL, p<0.05). All groups showed no significant differences for blood pressure, body weight, body mass index, fat free mass, body fat, and serum levels of albumin, total cholesterol, LDL-cholesterol, HDL-cholesterol, and triglycerides.

Conclusion : Impaired insulin sensitivity in both dialysis groups after long term dialysis was still higher than that of the non dialysis ESRD group. However, no significant differences were noted between CAPD and HD treatments.

Key Words : ● *Insulin resistance* ● *Hyperinsulinemia* ● *End stage renal disease* ● *Hemodialysis*
● *Peritoneal dialysis*

Abstract no. 83**The Appropriate status of Anesthesiologists of Phramongkutklao Hospital for Royal Thai Army Mission****Nopadon Chernsirikasem***Department of Anesthesia and Operating Rooms, Phramongkutklao Hospital*

Background : Phramongkutklao Hospital is the largest hospital of Royal Thai Army. The Anesthesiologist of this hospital are still not enough to serve the mission.

Objective : This research aims to study the appropriate numbers of anesthesiologists of Phramongkutklao Hospital for Royal Thai Army mission and the appropriate continuing education of anesthesiologists. The Anesthesiologists is a doctor who take care of the patient during surgery or procedures for example; colonoscopy, heart catheterization, pediatric MRI imaging etc. Phramongkutklao Hospital is the large hospital but no study about the appropriate numbers of anesthesiologist of this hospital was done before.

Methodology : The study was done by investigating the textbooks and varieties of documents and by interviewing the related person.

Results : The result of the overall study was found that the appropriate numbers of anesthesiologists of Phramongkutklao Hospital for Royal Thai Army mission are 20, and the appropriate continuing education is at least once a year.

Conclusion : The numbers of anesthesiologist of Phramongkutklao Hospital are not appropriate.

Key Words : ● *Anesthesiologists* ● *Royal Thai Army Mission*

Abstract no. 84**A Single-Centre Experience: Peritoneal Dialysis-related Infections in Patients on Long-term Dialysis**

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Objective: Peritoneal dialysis is a convenient way of maintaining patients with end stage renal disease (ESRD). In the present days, the Thai government supports all payments for ESRD patients. Continuous ambulatory peritoneal dialysis (CAPD) related infections are the major cause of morbidity and mortality. The present study was conducted to identify the incidence and epidemiological data of CAPD-related infection.

Material and Method: Medical records of 333 CAPD patients attending the Dialysis Unit of Phramongkutklo Hospital from January 1983 to June 2007 were reviewed. The historical cohort study was focused on the incidence of CAPD-related infections, causing pathogens, risk factors, and patient outcome.

Results: In total, 73.3% of episodes developed peritoneal infection. The incidences of peritonitis, exit site infection, and tunnel infection were 0.864, 0.213, and 0.034 episodes per patient per year, respectively. The most common infecting organisms were gram positive cocci (49.1%). The main pathogens were *Coagulase-negative staphylococcus* (15.9 %), *Staphylococcus aureus* (15.2%) and *Pseudomonas spp.* (14.2%). CAPD-related infections increased in patients who had age > 60. A total of 81% of the infections responded to initial antibiotic therapy administered in the dialysis fluid. Overall, there were 10 episodes (1.9%) of the refractory group and 83 episodes (15.4%) of peritoneal catheter loss, with an overall mortality rate of 1.1%. Non-vancomycin based regimens were applied in 63.9% of peritoneal infected patients.

Conclusion: The authors' center's CAPD-related infection rate achieved the International Society for Peritoneal Dialysis (ISPD) recommendation. A significantly enhanced incidence of CAPD-related infection occurred in advanced age. *Coagulase-negative staphylococcus* is still a very common organism that generally responds well to antibiotic therapy.

Key Words : ● Peritoneal infection ● Peritonitis ● Exit site infection ● Tunnel infection
● Peritoneal dialysis

บทคัดย่อที่ 85

กล้องจุลทรรศน์ (microscope) กับการรักษารากฟันในทางทันตกรรม

พิมพ์นลิน ภาณุพันธ์

แผนกวิชาคลองรากฟัน กองทันตกรรม โรงพยาบาลพระมงกุฎเกล้า

Background : ในช่วงทศวรรษที่ผ่านมา วงการทันตกรรมมีการพัฒนาไปอย่างมากทั้งทางด้านเทคโนโลยี เครื่องมือ และวัสดุ ซึ่งนำไปสู่วิวัฒนาการในกระบวนการรักษารากฟันทั้งทางด้านการรักษาแบบธรรมดา และการทำคัลยกรรม การนำองค์ความรู้เกี่ยวกับ operating microscope มาใช้ในการรักษาคลองรากฟันเป็นวิวัฒนาการใหม่ที่จะทำให้การรักษาประสบความสำเร็จมากขึ้น

ประโยชน์ที่สำคัญที่สุดของกล้อง microscope คือช่วยในการมองเห็นพื้นที่ในการทำงาน เมื่อมองเห็นได้ดีขึ้น สามารถทำงานได้ดีขึ้น โดยประโยชน์ของการนำกล้อง microscope มาใช้ในการรักษาแบบธรรมดา 1) การวินิจฉัย 2) การเปิดเข้าสู่คลองรากฟัน 3) การหาตำแหน่งรูเปิดคลองรากฟัน 4) การเตรียมคลองรากฟัน ช่วยในการกำจัด fix pulp stone และช่วยในการตรวจสอบความสะอาดของคลองรากฟันภายหลังจากการขยายและทำความสะอาด 5) การอุดคลองรากฟัน โดยใช้ดูความแห้งของคลองรากฟัน ความสะอาดของคลองรากฟัน ก่อนอุด 6) ใช้ในงานรักษาคอนกรีตรากฟันซี่ 7) จัดการข้อผิดพลาดจากการรักษารากฟัน เช่น ซ่อมแซมรูทะลุรากฟัน นำเครื่องมือที่หักออกจากคลองรากฟัน

ในการทำคัลยกรรมที่ปลายรากฟัน การใช้กล้อง microscope จะเพิ่มความสำเร็จเนื่องจากมีแสงสว่างที่เพียงพอ และเห็นภาพที่ใหญ่ขึ้นจากเลนส์ที่มีกำลังขยายขนาดต่างๆ สามารถตัดกระดูกได้ขนาดเล็ก อนุรักษ์ cortical bone และ โครงสร้างของรากฟัน รวมทั้งเมื่อมองภายใต้แสงสว่างและกำลังขยายขนาดสูงสามารถมองเห็นรายละเอียดบนพื้นผิวของรากฟันที่ถูกตัดไป เมื่อใช้กล้อง microscope ร่วมกับ อัลตราโซนิก ช่วยอนุรักษ์ส่วนของรากฟันที่เหลืออยู่ ผลลัพธ์จากการทำ root end preparation และ retrofills ทั้ง mechanical และ biologic จึงเป็นที่น่าพอใจ

Conclusion : การนำกล้อง microscope มาใช้ในทางทันตกรรมแสดงถึง การก้าวกระโดดของคุณภาพของวิชาชีพ การใช้กำลังขยายร่วมกับแสงสว่างมีคุณค่าในการเก็บรักษาฟันทั้งวิธีการแบบทำคัลยกรรมและไม่ใช้คัลยกรรม การรักษาที่ยู่ยากในปัจจุบันสามารถรักษาได้โดยมีอัตราความสำเร็จที่เพิ่มขึ้น และในอนาคตอันใกล้การติดตั้งกล้อง microscope ในห้องทันตกรรม อาจเป็นเรื่องที่ทำกันทั่วไป

Key Words : ● การรักษาคอนกรีตรากฟัน ● กล้อง microscope

Abstract no. 86**Effectiveness and Satisfaction of Hand-Woven Cloth Lumbar Support in the First Month of the Participants in the Innovation of Hand-Woven Cloth Lumbar Support for Sufficiency Community Project, in Rural Thailand**

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Background : Non-specific low back pain is one of the most common medical conditions which affects daily life, effectiveness in working, and quality of life. Seventy percent of Ban-Nap-Yao population had symptoms of non-specific low back pain. From participatory learning process with this community, we contributed to a conception for resolving this problem by using lumbar support that creates and develops from material in the region.

Objectives : To evaluate the efficacy of the hand-woven cloth lumbar support in decreasing the severity of non-specific low back pain in the first month of the participants in this project and evaluate the satisfaction of hand-woven cloth lumbar support in the first month of the participants for the qualitative improvement.

Methods : We conducted a non-randomized controlled trial and a qualitative study. We divided participants into 2 groups, both of them have to answer in questionnaire that record for baseline characteristics and standard measurement for back pain (Functional score, Pain score) and they will get the treatment for Non-specific Low Back Pain (Analgesic drugs, patient education) but the intervention group also get the lumbar support. Then, we follow-up low back pain and hand-woven cloth lumbar support usage by health volunteer every week in both intervention and controlled group and follow-up by research team every month for medication and evaluate Pain score, Functional score and satisfaction in every month.

Results : About Changing in pain score, we found the significantly statistical differences of mean score and Oswestry's LBP disability score between interventional group and controlled group in the first month (P-value < 0.001 and 0.033, respectively). However, there is not different in treatment by medication in

both groups that may be due to the participants like to use medicine more than using lumbar support. For satisfaction of Hand-woven lumbar support among intervention group, we found that most of participants are highly satisfied in effectiveness of hand-woven cloth lumbar support, design and material, usage and maintenance and economic issues of the participants.

Conclusion : By the result of this research shown a Hand-woven cloth lumbar support is an index for decrease Oswestry low back pain disability score and Pain score significantly that affect to reduce low back pain of volunteer.

Key Words : ● *Lumbar support* ● *Hand-woven cloth lumbar support* ● *Non-specific low back pain*

Abstract no. 87**Antibiotic Prescribing Patterns for an Upper Respiratory Tract Infection in an Outpatient Clinic in Bangkla Hospital, Chachoengsao Province**

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Background : Upper Respiratory tract Infection (URI) is a disease that can highly develop in both children and adults. In a tropical climate, Thailand in particular, there are unreasonable prescriptions of antibiotic which can cause drug resistance. Our objectives were to study the patterns of antibiotic prescribed that includes the knowledge, the perception, the belief, and the attitudes of the antibiotic prescription for URI in outpatient clinic in Bangkla hospital, Chachoengsao province.

Study Design : Descriptive research.

Method : Secondary data of quantitative and qualitative of URI from record of outpatient registration by ICD-10 system were used. Self-administered questionnaire was conducted to measure knowledge, perception, belief and attitudes of antibiotic prescription for URI.

Results : From the secondary data of the antibiotic prescribed patterns for URI, there were 691 URI patients (368 women and 323 men) age ranging from 27.1 ± 20 years. Of total 60.5% (n = 418) was acute pharyngitis. The items of medication used to cure were 3 ± 1 items including antipyretic drug. Antibiotic was used in 68.6% of cases. The cost of antibiotic was 79.8 ± 25.5 baht per visit. There were 27 prescribers (response rate 100%) joining this research which consisted of 5 general practice physicians, 11 emergency nurses (40.7%), 11 family practice nurses. The first 3 important reasons stated for the attitude to prescribe antibiotic were proper investigation and diagnosis, knowledge and awareness, judicious antibiotic use, guidelines and clinical evidence. Prescriber felt most confident when receiving advice from a pharmacist. It was found that the majority of prescribers were aware of the importance of drug resistance, and they thought that it was the critical problems of the hospital and the nation.

Conclusions : Three groups of prescribers had similar reasons to prescribe antibiotic, but they were some differences in clinical appearances used to make a decision. The price and quality of medicine were among the main reasons to prescribe antibiotic in the physician group. The belief, attitude and behavior toward antibiotic prescribing were appeared to be the same. There were many different kinds of knowledge and perception of antibiotic prescribing. The physician group can answer most accurately; two nurse groups answered both right and wrong. In the case of prescribing antibiotic for URI, three groups chose the same antibiotic regimen.

Key Words : ● Behavior ● Knowledge ● Attitude ● Prescribing antibiotic
● Upper respiratory tract infection ● Outpatient

Abstract no. 88**Self-Care Behavior and Quality of Life in End-Stage Renal Disease Patients with Hemodialysis at Bangkhla Hospital, Chachoengsao**

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Background : End-stage renal disease is a major health problem, the treatments are supportive treatment. Hemodialysis takes a major role in End-stage renal disease. The self - care behavior such as diet control is a critical factor in disease control. if it not achieved the goal, they will develop complications.

Objectives : To study self - care behavior and quality of life in end-stage renal disease patients with hemodialysis at Bangkhla hospital, Chachoengsao. The results will use to develop effectiveness of self care and quality of life in these patients.

Methods : We conduct Mixed - method model include qualitative study and quantitative study. In qualitative study, the purposive sampling and in-depth interviews have been done in the following issues consist of self - care behaviors and quality of life in three aspects. The total survey collects data by questionnaires that include demographic data, WHOQOL - BREF - THAI and quality of life measurement.

Results : Quality of life of volunteer is the moderate level. About self-care behavior, some of them know that they have end-stage renal disease. The other know only they have kidney disease. Most of volunteer don't know about how long they need dialysis. Family is one of the important factors in diet control. In the quality of life, most of them have fatigue but can do their daily activities by themselves. Travelling is not problem. From family support, they not have problems in work. Most of volunteers feel that they have burdened to the other. They tried to diet control but the problem is self-restraint. Most of them have rights to charge reduction. However, some of them have to pay and may have economic problems.

Conclusions : Quality of life of volunteer is in the moderate level. Most of them have a good understanding about self care behavior. In case of diet controlling, most of them have a good understanding but they can't achieve the goal. Family is one of the important factors in diet control of the patient. Quality of life of volunteers is below normal but most of them can do their daily activities by themselves and adapt to continue their lives.

Key Words : ● *Self-care behavior* ● *Quality of life* ● *End-stage renal disease* ● *Hemodialysis*

Abstract no. 89**Quality of Life among Osteoarthritis Patients with Acupuncture Technique at Bangkhla Hospital**

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Background : Nowadays, we have a new method for treatment known as alternative medicine. The acupuncture is a famous one because of it relieved pain and treat some diseases such as asthma, stroke, osteoarthritis.

Objectives : To study the effects of acupuncture therapy in patients with osteoarthritis of the knee that can improve the quality of life in patients or not.

Methods : We conducted mixed methods for study the quality of life of osteoarthritis patients who treated with acupuncture at Bangkhla Hospital, Chachoengsao. Divide. We applied the questionnaire about quality of life for quantitative study. An in-depth interview was used for compare the quality of life before and after treatment with acupuncture. We used WHOQOL - BREF questionnaire for evaluated quality of life.

Results : From qualitative study, we found that acupuncture can reduce pain by significant decrease of pain score, improved activity daily of life and efficiency in working. However, some of them lack of knowledge and understanding about acupuncture. From quantitative study, we evaluated in 4 aspects; physical, psychological, social and environmental. Almost the fourth sides of the result are in upper limit

Conclusions : Acupuncture can improve the quality of life by reduce pain explicitly, improve activity daily of life and increase efficiency in working. The quality of life of osteoarthritis's patient in physical, psychological, social and environmental is good. Most of them lack of knowledge about benefits of acupuncture.

Key Words : ● *Osteoarthritis knee* ● *Pain score* ● *Acupuncture*

Abstract no. 90**Perception and Understanding of People Towards
Emergency Medical Services at Bangkhla Hospital**

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Background : Emergency illness is an illness that occurs unexpectedly. It may be fatal or cause disability, especially when occurs outside the hospital and must be corrected immediately. When people are in panic with confusion cannot help themselves, well established channels of assistance and knowledge of rescue operations are necessary. Factors affecting survival are those aids to get the help in time. Therefore, emergency medical services are needed. It is very important for us to enable people to access emergency medical services.

Study Design : Quantitative Cross-sectional Study using SPSS 19.0 and descriptive statistics to analyze the data.

Materials and Methods : The questionnaire topics include personal demographic data and an understanding of Emergency Medical Service System was surveyed. The closed and open-ended questions about their knowledge, experience and satisfaction regarding the use of emergency medical services were interviewed.

Results : The study found that 64.1% of participants understood the meaning of EMS as a medical aid at the scene. Of total 67.1% knew emergency medical service or 1669.34.1% of participants perceived that it could be faster to go to hospital by themselves. The samples were not satisfied and thought that there should be improvements in the service of emergency medicine in 1669. Factors found having association to accessibility to emergency medical services system were less than 40 years of age (P-value 0.035) and level of education (P-value 0.026).

Conclusions : Emergency medical services system became well known among those using the EM service (67.1%), the larger the level of education. The public relation influenced their accessibility. However there are also groups that do not recognize the medical emergency services. The majority of those chose to come by themselves because they think faster and more convenient.

Key Words : ● EMS ● ACLS ● BLS ● Emergency ● Urgency

Abstract no. 91**A Comparison of the Results in the Treatment of Type II Diabetes between Pattananikom Hospital and the Institute for Primary Health Care Innovation Participation, Pattananikom, Lopburi**

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Background : Diabetes Mellitus (DM) is a chronic disease that the treatment is not completely cured and found increasingly. In Pattananikom hospital, there is a referral system between the Institute for Primary Health Care Innovation and the hospital. This is to decrease the workload of the hospital staff and help patients to receive drugs near homes. This system has been established for several years but there is no study on the results in the treatment of Type II DM patients Pattananikom hospital and the Institute for Primary Health Care Innovation participation.

Objectives : To compare the effects of care for type II DM among patients treated at Pattananikom hospital and at Institute for Primary Health Care Innovation participation in Pattananikom, Lopburi.

Study Design : A quantitative (Cross-sectional analytic study) and qualitative study.

Materials and Methods : The quantitative samples collected from patients with type II diabetes treated at the hospital and Institute for Primary Health Care Innovation at least 360 people and Qualitative Study in-depth interview from patients and health workers in the Institute for Primary Health Care Innovation.

Results : The sample was totaled at 383 participants from the comparison of the treatment of diabetes type II receiving treatment in Pattananikom Hospital and Institute for Primary Health Care Innovation participation. Factors affecting control of diabetes included gender, age and number of years has been diagnosed with diabetes. Women were 1.698 times more at risk of diabetes than males (p-value = 0.046). Patients aged < 40 years found had 4.167 times of the risk of diabetes when compare to patients aged 70-79 years (p-value = 0.029). Patients were diagnosed with diabetes for > 10 years were more at risk of diabetes when compare to patients who had been diagnosed with diabetes for < 5 years (2.859 times, p-value = 0.009)

Conclusion : Comparisons of the treatment of type II diabetes receiving treatment in hospital and Institute for Primary Health Care Innovation participation was not significantly different. Factors affecting control of diabetes include gender, age and number of years has been diagnosed with diabetes.

Key Words : ● *Effects of treatment* ● *Type II diabetes* ● *Institute for Primary Health Care Innovation*

Abstract no. 92**Patterns of Road Traffic Injuries in 2010 and Effectiveness of First Responders Working in Pattananikom Hospital, Lopburi****Ruamhathai Mahavinitchaimontri, Supawat Wattanakunwiwat,****Nopporn Pongpluempitichai², Suthee Panichkul¹, Ram Rangsin¹, Pote Aimpun¹,****Danai Heebthamai¹, Tanongson Tienthavorn¹, Kanlaya Jongcherdchootrakul¹, Wirote Areekul¹***Sixth year Medical Cadet; ¹Military and Community Medicine Department, Phramongkutklao College of Medicine; ²Pattananikom Hospital*

Background : Road accidents are a major problem in Thailand resulting in economic losses more than 232,000 million baht annually. If the injury management is proper and effective, it can reduce the risk of disability and loss of life dramatically. Pattananikom Hospital has trained the rescue staff and First Responders in First aid issues and the study of basic life support services. The course includes the scenarios and quality of care delivery.

Objective : To study the effectiveness of the initial management at the scene characterization of injury, location and severity and time of injury and find out the patterns of events and types of injuries in traffic accidents.

Study Design : Retrospective descriptive study and qualitative study.

Materials and Methods : Secondary data in year 2553 from Emergency department was used to describe types of injury, time of accident, place of the accident and accesses to EMS. Qualitative data were collected by in-depth interviews on equipment, management and communication issues.

Results : There were 1,464 accident victims reported in 2553. The majority of cases was male (66%). Most accidental vehicle was motorcycle (72.9%). The most severe injury was head related injury (44 cases). In case of bleeding events, some of the first responders did not stop bleeding (22%) and a few responders did stop bleeding but incorrect (1%). In case of deformities, the first responder did not do splinting in only 7% of cases and rarely did splinting but incorrect (0.3%). Period of Time to response in case of 10 km. away from the head quarter that finished in less than 10 minutes were reported as 79% of cases. Welfare and equipment were among staff concerns.

Conclusion : Most accidental vehicles in Pattananikom district were motorcycles. The most severe injury was head injury. Effectiveness of First responders was perceived as good and can apply basic principles in such emergency situations. Equipment and welfare remained insufficient. Further development can improve the effectiveness of first responders.

Key Words : ● *First responder* ● *Traffic injury*

Abstract no. 93**Number and Types of Traffic Injuries and Medical Responses at Pattananikom Hospital Emergency Department**

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Background : An injury is a major problem in Thailand, and potentially increases both national financial loss of budget and lives loss. Patthananiikom district is located on a major route through to the other neighboring provinces which dramatically increases risks of traffic accidents. Pattananikom hospital has educated and trained personnel to respond to traffic victims promptly and effectively. Currently number of deaths and disabilities from traffic accidents continue to increase despite an ongoing training to provide knowledge and practice on a regular basis.

Objective : To study the effectiveness of medical teams in emergency department at the Pattananikom hospital and to study about type, severity and number of accidental injuries that led to emergency room visits of Pattananikom Hospital.

Study Design : Retrospective descriptive study and qualitative study.

Materials and Methods : Quantitative study data collected type, severity and number of accidental injuries. Data was collected from secondary data of an emergency department, Patthananiikom Hospital database. Qualitative data was collected from emergency room personnel by in-depth interviews and observations about preparation and management for traffic injury patients. The data was recorded by voice recorders and divided into two groups. The first group coded keywords and analyzed factors that affect efficacy of emergency team and the second group was then re-analyzed (double coding).

Results : It was found that traffic injuries occurred in Patthananiikom district in 2010 were 1,464 cases (male 66%, female 34%). Most involved vehicles were motorcycles (72.9%). The behavior of wearing helmet was reported only 51% and behavior of wearing seat belt found in 75.8% of cases. Most of the accidents (67.5%) were minor injuries. Abrasion is the most accidental injury (n = 785 cases). The most severe injury was found associated with head injury (44cases). Emergency room prepared necessary equipments properly. Emergency personnel actually have had intellectual knowledge, but not yet fully able to do. Number of personnel was not enough. They also lack the training for medical personnel.

Conclusions : Most accidental vehicles in Pattananikom district were motorcycles and the most severe injuries were related to head injury. Although emergency personnel actually had medical knowledge, they were unable to handle the situation as a result of an inadequacy of personnel and proper training.

Key Words : ● *Traffic accidental injury* ● *Medical responses*

Abstract no. 94**Triage System of Emergency Department at Pattananikom Hospital**

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Background : Being triaged by acuity, patients visiting emergency department could be evaluated in appropriate time. The standard of triage of each setting must be modified to match with their facilities.

Objectives : To study the triage system of emergency department at Pattananikom hospital and match the categorized triage with CTAS standard.

Methods : We conducted a descriptive Cross-sectional Study. All of patients who visited at emergency department, Pattananikom Hospital during June 26th - 30th, 2011 were included to this study. We collected and analyzed the effectiveness among waiting time aspect of triage system at Pattananikom Hospital compare with Canadian Triage and Acuity Scale (CTAS).

Results : Two hundred and forty patient's data was collected through triage system of Pattananikom hospital. Triage personnel were nurse, nurse assistant and paramedic. The CTAS 2 and 3 patients (urgency patients) were triage as routine patients; 10 cases (5.3%) and 33 cases (17.5%) in order. The CTAS 4 and 5 patients (routine patients) were triage as urgent patients; 14 cases (28.0%) and 3 cases (6.0%) respectively. Around one fourth of patients had misclassified triage. The waiting time for physician and compliance of triage among only CTAS 5 met the standards.

Conclusions : Triage system of Pattananikom hospital did not meet the CTAS standard. Besides; triage personnel were not qualified, advised and examined. There were great numbers of misclassified triaged patients. The patients with life-threatening condition have been taken a risk of delayed treatment.

Key Words : ● *Triage* ● *Emergency department* ● *CTAS* ● *Effectiveness*

Abstract no. 95**Knowledge and Awareness of Health Care Stakeholders in the Prevention and Control of Hand-Foot-Mouth Disease in Pattananikom District, Lopburi**

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Background : According to the report, from January 1st - August 13th 2011, there have been 7,844 reported cases of HFMD of which 5 were fatal. HFMD is the tenth epidemic disease in Lopburi. We found 147 HFMD cases and 2 of them were died. Due to HFMD is high magnitude of problem in lopburi, we have been interested about the knowledge and awareness of Health care stakeholders in the prevention and control of HFMD.

Objectives : To study knowledge and awareness of Health care stakeholders in the prevention and control of Hand, Foot, Mouth disease in Pattananikom district, Lopburi.

Methods : We conducted a descriptive study among health care stakeholders in the prevention and control of Hand Foot Mouth disease in Pattananikom district, Lopburi. Our questionnaires evaluated knowledge and awareness of HFMD prevention and control measure.

Results : Most of them (74.3%) are female. Around one-third (36.1%) finished primary school. Sixty six point three percent are health care providers. Seventy five point six percent don't have ever seen or taken care of HFMD patients. Seventy seven point four percent knew that there is a prevention program to control HFMD but 43.3% have not ever been provided this program. twenty four point five percent and 38.4% have good knowledge and awareness level respectively. The knowledge level between before and after of the HFMD conference are not significantly different but the awareness level are.

Conclusions : The knowledge level between before and after the HFMD conference is not significantly different. Gender and experience with HFMD associate with the knowledge level before the HFMD conference. The awareness level between before and after the HFMD conference is significantly different. Education, experience with HFMD and HFMD knowledge provided person associated with the awareness level before the HFMD conference.

Key Words : ● *Hand-Foot-Mouth disease* ● *Knowledge* ● *Awareness* ● *Health care* ● *Stakeholders*

Abstract no. 96**A Qualitative Study of Hand-Foot-Mouth Disease Prevention Among Parents and Teachers of Child Care Centers in Preschool and Elementary School in Pattananikom District, Lopburi**

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Background : The incidence of Hand-Foot-Mouth (HFM) disease in Thailand is increasing trend. During January to August 2011, 4 HFM cases died. Due to the high magnitude of cases, we interest guidelines of prevention and control measure of HFM disease.

Objectives : To study knowledge, understanding, attitude of guidelines of prevention and control measure of HFM disease among teachers and parents in nursery school and child care centers.

Methods : We conducted in-depth interviews among teachers and parents of children who attend in nursery school and child care centers at Pattananikom district, Lopburi Province during 29th August - 15th September 2011. We used stratified purposive sampling to collected sampling population.

Results : Most parents and teachers lack of understanding and awareness about HFM disease. They have positive attitude but not understanding about the disease prevention and control. Most of them realized that responsibility for disease prevention and control is the duty of medical personnel. The actions of HFM disease prevention and control are doing in a short period of time. Household members purposed that child care and kindergarten teachers are important for the prevention and control disease. Due to them knew and could do the prevention and control measure.

Conclusions : Most people lack of the knowledge, understanding and awareness of the disease prevention and control measure that misconception. Effective public policies are the most popular way to prevention and control this disease.

Key Words : ● *Hand-Foot-Mouth disease* ● *Guidelines of disease control and prevention*

Abstract no. 97**Predisposing Factors to Hypertensive Emergency in Elderly Patients with Hypertension in Sanamchaiket Hospital**

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Background : In the future, our society will be elderly society. Chronic disease will be high magnitude of the problem that hypertension is most common one of this group. Ongoing-uncontrolled blood pressure cause hypertensive emergency.

Objectives : To explore predisposing factors of hypertensive emergency in elderly patients with hypertension.

Methods : We conducted in depth-interview by specific random method. We interviewed the hypertensive emergency who visited at emergency room and follow up at the outpatient department inspection at Sanam Chai Khet of Chachoengsao Hospital during March 22 - April 11 2011. In-depth interviews used open-ended questions about the predisposing factors to hypertensive emergency in the elderly. We assessed about understanding of hypertension, accessing to hospital and evaluating quality of life after hypertensive emergency.

Results : Nine hypertensive emergency cases that unable to control blood pressure are poor in behavior of eating and continuing-medication. Knowledge about hypertension, having care givers, knowledge of patient care and economical status of patients are poor. Locations of hospitals and distant relationship of physicians with patients are associated with poor controlled blood pressure. Fourteen hypertensive emergency cases increase knowledge, awareness or experience about hypertensive emergency after their hypertensive emergency experience. And they are trying to resolve various factors to control high blood pressure.

Conclusion : The most important predisposing factor of hypertensive emergency among elderly is the take care themselves behavior of patients. There are also economical factors as affecting access to public health. When the patient have experience about hypertensive emergency, they increase awareness, knowledge. It will make the patient try to resolve their own factors to control their blood pressure.

Key Words : ● Hypertension ● Elderly ● Blood pressure ● Hypertensive emergency

Abstract no. 98**Drug Administration Errors Inpatient Department and Risk Management of Health care Officers in Sanamchaikhet Hospital**

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Background : Error in drug administration included drugs, intravenous fluid or blood component could be harm to patient in in-patient department, which lead to prolonged hospitalization or morbidity and mortality. Studying in understanding in risk management of healthcare professionals and report of incidence in hospital may lead to improvement in planning method to decrease incidence, improve quality of life and hospital medical service.

Objectives : To know type severity and opportunity in occurring of drug administration error in the hospital in in-patient department and understanding of risk management in healthcare professionals who work under hospital planning.

Methods : We conducted mixed-method study. Study is conducted by retrospective cohort study. Data are collected from self-report data which recorded from in-patient department since October 1st, 2009 to April 30th, 2011. Data were categorized into 3 parts. Part 1 are information about drug administration error such as reporter responder type and severity of the error. Part 2 are demographic data of population which involved in in-patient drug administration and have risk to make an error. Part 3 are qualitative study which gathered information about understanding in risk management of healthcare professionals and problem according to guideline by in-depth interview.

Results: Most of healthcare professionals who have joined the research were female and in 31-40 years old. Most of them are nurse and have working experience about 1-10 years. Report of drug administration error were 62 times in October 1st, 2010 to April 30th, 2011, which more than October 1st, 2009 to September 30th, 2010 (48 times). Most of drug administration error were oral route. Most of incidence were detected before reach patient (Category B). Most frequent reporter was drug room. Most of errors are human error, which is 89.1%. From in-depth interview, we found that most of healthcare professionals understood in risk management and know how to be done but not fully cooperated with guideline. There were planning and discussion after each incidence of drug administration error.

Conclusions : Although, there were many planning to prevention drug administration error. Report of drug administration error still remained. Most of errors are human error. We suggested that there should be planning for new method to control human error and decrease incidence of drug administration error to minimum.

Key Words : ● *Drug administration error* ● *In-patient department* ● *Risk management*

Abstract no. 99**Factors that Act as Barriers to Proper Health Behavior in Type 2 Diabetes Mellitus Patients at Sanamchaichet Hospital**

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Background : Diabetes mellitus (DM) is an important problem both in Thailand and worldwide. Thus, the researcher's aim is to study the factors that act as barriers to appropriate health behavior in type 2 DM patients in outpatient department which has not enrolled in study program arranged by Sanamchaichet hospital. The information acquired will be used to improve quality of the caring methods based on the Health belief model for outpatients and DM clinic at Sanamchaichet Hospital. The researchers also aim to study the modifying factors which affects perceived barrier of DM type 2 patients.

Objectives : To study the factors that act as a barrier to appropriate health behavior in type 2 DM patients at Sanamchaichet Hospital.

Methods: Qualitative study including in-depth interview type 2 DM patients at Sanamchaichet Hospital.

Results : From the in-depth interview of 20 DM type 2 patients, factors that act as barriers appropriate health behavior in DM type 2 patients are social and personal factors:

1. Social factors are family, friends, and reference groups. Aging population tends to have musculoskeletal pain, joint pain, working population tends to be tired from hard work and have no time. These act as barriers to exercise. Religion, monks can't wear shoes when they go Binhabat. Family, housewives choose to cook based on the family preference. Friends and other reference groups including the community radio value other drugs to treat DM which has not been approved which influence patients with DM type 2 to believe and use these alternatives.

2. Personal factors are age, religion, occupation, basic knowledge and experience about the disease. Some patients don't know that DM is a chronic disease, don't know how to exercise appropriately and think that working hard is enough, and don't know that checking their foot is necessary. Moreover, they can't stop eating sweet food.

Conclusions : Factors that act as barriers to appropriate health behavior in type 2 DM patients at Sanamchaichet Hospital in population aspect are the culture which Thai people usually eat together acts as an obstacle to DM patient getting appropriate food, Buddhist believe about not letting monks wear

shoes while Binhabat. Physical condition, friends and reference group from community radio which value alternatives to DM drugs. Supporting factors are inadequate knowledge and experience about the disease and overworking in laboring jobs. Moreover, doctors do not get enough trustworthiness which makes the patient receive not enough health information. Supporting factors are inadequate knowledge and experience about the disease.

Key Words : ● *Health belief model* ● *Modifying factors* ● *Type II diabetes* ● *DM clinic* ● *Stakeholders*
● *Sanamchaichet hospital* ● *Chacheongsao*

Abstract no. 100**Factors Influenced Appendicitis Patients Referral
from Sanamchaikate Hospital to Chachoengsao Hospital**

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Background : In appendicitis patients, some cases can perform appendectomy at hospital and some cases have to be referred for appendectomy at Chachoengsao hospital. These could be influenced by various factors in relation to the cases. Identifying factors for making a decision where to perform appendectomy for suitable clinical outcome for management of appendicitis patients in Sanamchaikate hospital patients would be helpful for both patients and medical staff.

Objective : To study an incidence of, complications of and factors influences doctor's decision to refer appendicitis cases in Sanamchaikate Hospital.

Study design : Descriptive observational study, cross-sectional study.

Materials and Methods : The data was collected from OPD card and IPD cards of appendicitis patient both appendectomy at Sanamchaikate Hospital and referred cased for appendectomy at Chachoengsao Hospital.

Results : Patients who were diagnosed as appendicitis accountedfor 80 participants (response rate 100%). Of these, 70% was performed appendectomy at Sanamchaikate Hospital and the rest (30%) were referred to higher level hospital. Most patients used Universal Coverage scheme (UC). Male was found in 51.3% of cases (median age 27.5 ± 17.5 years). An average body mass index was 22.2 ± 4.3 kg/m². Patients with underlying diseases found 23.8% of cases. Symptoms of appendicitis reported as follows:RLQ pain (97.5%), RLQ tenderness (87.5%) with an alvarado score at 7 ± 1.6 . Leucocytosis and left shift leucocytosis found in more than 80% of cases. Provisional diagnosis wereacute appendicitis (81.3%), ruptured appendicitis (5%), phlegmon (1.3%) and abscess (1.3%). Patients performed appendectomy at Sanamchaikate hospital reported as appendectomy with primary closure at (78.6%) and ruptured appendicitis (21.4%) with delayed primary suture (75%). An average length of hospital stay was 4 ± 1.9 days with no acute complication. Patients in a more than 60 years age group were found more likely to be referred for 15 times higher than patient in less than 60 year age groupwith P-value $\leq 0.05\%$ (95% C.I. 1.589-131.869). Patients with

Alvarado score less than 7 were found to have more chance to be referred when compared with patients with Alvarado score more than 7 for 4 times at P-value $\leq 0.05\%$ (95% C.I. 0.084-0.709).

Conclusion : Factors influenced referral were age more than 60 years and Alvarado score rated less than 7. Most patients were correctly diagnosed while only a few of them diagnosed gastroenteritis or abdominal pain.

Key Words : ● *Appendicitis* ● *Ruptured appendicitis* ● *Appendectomy*

Abstract no. 101

**The Relationship of the Differences of CD4+ T-Cell Count Level
at the Beginning of Antiretroviral Therapy of Human Immunodeficiency
Virus Infection Patients at Sanamchaikate Hospital**

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Background : Many patients living with asymptomatic human immunodeficiency virus (HIV) infection have not received antiretroviral therapy (ART). It is still unclear whether such therapy should be initiated immediately or deferred until the CD4 cell count is lower and/or the plasma viral load is higher. In untreated HIV infection, the risk of turning into acquired immunodeficiency syndrome (AIDS) stage is small before the CD4 cell count has reached 200. Early therapy can lead to risk of drug toxic effects or drug resistance. Delayed therapy, on the other hand, may develop immune reconstitution in low CD4 count patient

Objective : To study the relationships CD4 cell count in response to antiretroviral therapy according to the baseline of CD4 cell count in HIV infection patients.

Study Design : Retrospective cohort study was conducted for relative risk. Retrospective cohort study on the relationships CD4 cell count response to antiretroviral therapy according to the baseline of CD4 cell count in HIV infection patient.

Materials and Methods : Quantitative data was collected from OPD card to study the difference of the average level of CD4 and t-cell at 6 months after receiving treatment with antiretroviral therapy for HIV and analyzed by one way ANOVA t test.

Results : This study had 91 HIV infected patients living with ARV treatment for 6 months. The average age of HIV infected patient was 31-40 years and most of these were female. The mean baseline CD4+t-cell was below 200 cell/ul. In this study, patients were divided into three groups by level from the baseline CD4 + t-cell <100 cell/ul, 100 -199 cell/ul and 200 - 349 cell/ul. The mean baseline CD4 + t-cell is 37.57, 147.64 and 246.13 cell/ul respectively. At 6 months after treatment showed that patients with baseline CD4 + t-cell at the 200-349 cell/ul with a mean level of CD4 + t-cell, most 294.38 cell/ul. Considering the average of the difference between the levels of CD4 +t-cell before and after treatment in each group. The increment of the mean CD4+ t-cell is 135.61 cell/ul in baseline CD4 + t-cell <100 cell/ul which is higher

than other groups. In addition, the researchers compared the differences in average levels of CD4 + t-cell after being treated with antiretroviral therapy for HIV at 6 months, the result shows that the mean of CD4 + t-cell after treatment in each baseline group were significantly different ($p = 0.001$), when compared with a baseline CD4 + t-cell 200 - 349. The relative risk of having a CD4 + t-cell after treatment for more than 200 cell/ul in the baseline CD4 + t-cell <100 cell/ul is 5.37 times more than the compared group.

Conclusion : The average CD4 + t-cell levels after treatment in each group had statistically significant differences baseline CD4 + t-cell. When compared with a baseline CD4 + t-cell < 100 cell/ul the relative risk of having a CD4 + t-cell treatment for more than 200 cell/ul of the baseline CD4 + t-cell 100 - 199 cell/ul was greater than the comparison group are statistically significant (RR = 5.37, CI: 1.885-15.275).

Key Words : ● AIDS ● ARV ● CD4+tcell

Abstract no. 102**The Factors of Non Steroidal Anti-Inflammatory Drugs (NSAIDs) Received in Low Back Pain Regimens at Fort Suriyapong Hospital**

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Background : Low back pain often diagnosed and treated in out-patient department. Most of these patient received Non Steroidal Anti-Inflammatory Drugs (NSAIDs) for supportive treatment. Subsequently, patients suffered from adverse NSAIDs effects such as gastric ulcer, renal impairment and drug allergy. Those aged patients receiving NSAIDs would increase risk from NSAID adverse drug effect with serious conditions that run down quality of life and also mortality. The adverse drug effects of NSAIDs can be prevented, if physicians realize the complications from NSAIDs using.

Objectives : For study factors of NSAIDS received in low back pain regimens at Fort Suriyapong Hospital.

Study Design : Cross-sectional study.

Materials and Methods : This research conducted by cross-sectional study. The questionnaires consist of 2 parts was conducted, first is the demographic data and the second is Oswestry Low back pain disability questionnaires. Then, the information gathered from the questionnaires and patient's medical record will be recorded and analyzed statistically to find factors of NSAIDs receiving in low back pain treatment at Fort Suriyapong Hospital.

Results : Patient's factor associated with NSAIDs receiving was patient's education. We found patient who have education lower than bachelor's degree tended to receive NSAID more than patient who graduated bachelor's degree or higher 3.662 times (95% CI: 1.533-8.745). Other patient's factor is patient's income, who have monthly income from 15,000 to 30,000 baht will likely to received NSAIDs less than who have lower monthly income 0.772 times (95% CI: 0.388-0.915). In disease's factor, patients who have ODI score in the range of moderate disability or higher was more likely to received NSAIDs more than those with ODI score in the range of minimal disability 2.428 times (95% CI :1.097-5.371).

Conclusion : Patient's factors associated with NSAID receiving included patient's education and patient's income. Patients who have more clinical symptoms of low back pain tend to received NSAID more than who have less clinical symptoms. So the proper efficacy in symptoms relief such as proper drug using, alternative medicine. Self-care would control the NSAIDs use.

Key Words : ● *Low back pain* ● *Non steroidal anti- inflammatory drugs (NSAIDs)*

Abstract no. 103**Quality of Life in Chronic Pain and Pain Catastrophizing Thoughts Patient at Fort Suriyapong Hospital****Kollawat Sirapalanon, Phumiphat Wongchaiwatcharakul, Bunnam Chalernsuk²,****Suthee Panichkul¹, Ram Rangsin¹, Pote Aimpan¹, Danai Heebthamai¹,****Tanongson Tienthavorn¹, Kanlaya Jongcherdchootrakul¹ and Wirote Areekul¹***6th year Medical Cadet; ¹Military and Community Medicine Department, Phramongkutklao College of Medicine; ²Fort Suriyapong Hospital*

Background : Chronic pain is a common condition that can be found in medical practice. It is known that pain is not only a direct impact on patient suffering. But also affects patients in the other aspect. The study by the World Health Organization found that people with chronic pain are at risk of depression and anxiety than normal to 4 times and there is a problem at work than normal to 2 times. Patients with chronic pain often found that there is a fear of moving the body part that hurts. That leads to avoidance behavior and degradation of the body section. For this reason, many patients who have chronic pain problems often feel pain more than the reality or have a pain catastrophic. In many past research found that chronic pain has a negative effect on quality of life of patients. But there are few research studies about the association between pain catastrophic and quality of life. In the treatment of patients with chronic pain we need to treat patients holistically to improve the overall quality of life of patients. But today we focus only on the biological aspect. If the pain catastrophic have an effect on the quality of life, the psychological therapy will be important in the treatment of patients. We may need to evaluate patients with chronic pain or pain catastrophic and must be treated together with the psychotherapy.

Objectives : To study the quality of life of patients with chronic pain. In patients undergoing treatment. at Fort Suriyapong Hospital, Nan, Thailand

Methods : We conducted cross-sectional study. This research is a cross-sectional study with a sample of the population in the community, Muang District, Nan Province with chronic pain. During Day 1 - May 27, 2554 is mainly based on questionnaires. The quality of life questionnaire SF36-V2, and pain catastrophizing scale PCS.

Result : This study is a form. cross-sectional study population participating in this study participants with chronic pain who were divided into 50 males and 25 females were 25 people, all people are Buddhists. Basic data on the level of pain was an average of 5.4 ± 1.9 , mean duration of pain was at 11 ± 12 months. Average mental component score is 43.63 ± 5.81 . Average physical component score is 48.52 ± 7.4 . Average pain catastrophizing scale is 18 ± 10 . All variables are statistically analyzed using independent sample test and found that no sexual association with any variables. From a statistical analysis using pearson correlations coefficient was found that the pain intensity is associated with quality of life in some significant statistical level of confidence 95%. The relationship with general health

role emotion and mental component at a low level. Pain catastrophic associated with quality of life in all aspects except level of physical pain (Bodily pain), with moderate relationships with role physical, general health, vitality, role emotion, physical component, mental component correlated with low physical function, social function, mental health.

Conclusions : The analysis of data showed that Pain catastrophic impact on the quality of life is significant. It was found that Pain catastrophic impact on quality of life than the intensity of pain was found in the relationship in a higher level and has relationships with virtually every aspect of quality of life. Pain catastrophic is related to quality of life in the physical too, so it can be concluded that the treatment of chronic pain, we should focus on the treatment of mental patients. It would be useful to the patient more than treatment in physical aspect.

Key Words : ● *Paincatastrophic* ● *Pain intensity quality of life*

Abstract no. 104**Patient-provider Relationship, Patient's Compliance and Fasting Plasma Glucose Level of Diabetic Patients in Thaluang Hospital**

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Background : Controlling diabetic progression at optimum fasting plasma glucose level needs medical adjustment and patients' adherence affected mainly by patient-provider relationship. So identification of the correlation between patient-provider relationship and patients' compliance along with medical outcome is necessary in planning for health-care services.

Objectives : To identify correlation between patient-provider relationship and patients' compliance along with fasting plasma glucose level in diabetic patients at Thaluang hospital, Lopburi Province.

Study Design : Cross-sectional descriptive and analytic study about patient-provider relationship composed of provider participatory decision-making, provider communication and patient understanding, on patients' compliance and fasting plasma glucose level.

Materials and Methods : Data was collected from diabetic patients at One-stop service clinic for diabetes in Thaluang Hospital, Lopburi Province during 11th - 26th May, 2011 using questionnaire and out-patient department card by asking the participants to answer the questions or an interview.

Results : Patient-provider relationship, patients' compliance and fasting plasma glucose level are significantly associated. But only provider participatory decision-making was associated with patients' compliance while only patient understanding was associated with fasting plasma glucose level. ($r = -0.159$; $p = 0.025$)

Conclusion : This results show that patient understanding about the disease and self management is important in gaining optimum fasting plasma glucose level.

Key Words : ● *Patient-provider relationship* ● *Compliance* ● *Diabetes*

Abstract no. 105**Incidence and Factors Associated with Revisits to Emergency Room within 48 Hours at Thaluang Hospital**

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Background : When patients return to the emergency room (ER) shortly after being treated, it is generally assumed that their initial evaluation or treatment was inadequate. Many short-term revisits may be medically unnecessary since substantial numbers of patients attended ER for nonemergency problems. Consequences of revisits do harm to not only patients in many aspects including physical, mental and their economic, but also medical staff in terms of increasing the workload, wasting resources and the quality of treatment. Thaluang hospital offered up to one percent of 48-hour revisits per year.

Objectives : To study incidence and factors associated with emergency department revisits within 48 hours at Emergency Room from May 2553 to April 2554 Thaluang Hospital, Thaluang district, Lopburi province and to study the outcome of revisit and factor associated with that outcome.

Study Design : Quantitative descriptive analysis.

Materials and Methods : Identify the interesting problem and make a topic research, review of associated literatures, planning and designing of study, connecting to the health officials at Thaluang Hospital, explaining the objectives of research and asking for cooperation, sampling the population. The secondary data was gathered and analysed from HosXP program.

Results : One hundred and twenty-fives cases (0.59%) revisited the ER within 48 hours after their initial visit. The most common initial ER diagnosis was acute bronchitis (28 cases, 22.40%). The most common causes of revisits were clinical failure to improve, new problems or progression of disease and recurrent disease process. The most common period of revisits was during 01.00-01.59 a.m. (2.20%). The most crowded revisit month was in November (1.00%). And the most common outcome of revisits was discharge (68 cases, 59.60%)

Conclusions : The incidence of patients revisited the ER within 48 hours after their initial visit which was less than the Thaluang Hospital's revisit index. There were many factors associated with ER revisits. Most of revisiting patients were younger than 15 years old, so they might give detail of their symptoms inadequately or their parents were over-concerned then patients came to ER so early that typical presentations cannot be detected. Patients could be misdiagnosed by health care providers. Differentiation between the natural course of a disease, suboptimal therapy, over anxious reaction, and medical errors is difficult. Good communication skills and good patient-physician relationship are much more important than revisits rate in the quality assurance of emergency care.

Key Words : ● *Revisit* ● *Emergency room*

Abstract no. 106**Public Health Services's Attitude with Immigrant Workers Attending
Thaluang Hospital, Thaluang District, Lopburi Province**

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Background : The economic growth of Thailand has increased continuously accompanied by the policy to accelerate the development expansion to every region of the country. Thai rural labor especially in agricultural sector move to the urban area because of the higher wages. The shortage of labor in many provinces has brought about illegal and legal labor across the border. Since Lopuiri has high growth rate of economics, there are lots of illegal migrants. Resulting in social and public health problems.

Methods : Cross-sectional analytic study; to study about problems in public health services emerging from Immigrant workers attending Thaluang Hospital, Thaluang district, Lopburi province. Cross-sectional descriptive study; to study about demographic data of migrants workers who attending Thaluang Hospital, Thaluang district, Lopburi province since July 2010-June 2011. Researchers designed questionnaire base on problems which found in public health services of Thaluang Hospital. Study populations are health care workers in Thaluang Hospital who contact migrant workers. The demographic data of migrant workers who attending Thaluang Hospital received from HosXP (computer program for collect patients data).

Results : Since July 2010-June 2011, the number of migrant worker patients who attending Thaluang Hospital outpatient department is 2,877 times, 10 people per day, attending in patient department 104 people per year including deliver 17 people. Sixty-six point two percent of migrant worker patients are Myanmar Burmese. Sixty-six percent of migrant worker patients are working at Saha Farm Factory. Average medical treatment curse of inpatient is 3,098 baths/time, outpatient is 224 baths/time which most patients have to pay themselves because they are illegal migrants. The most diagnosis diseases are trauma, occupational diseases and respiratory tract infections. There are different problems in health care services in each department. Seventy-six point five percent of heath care workers have problem in explain medical information to migrant workers. Seventy point six percent of heath care workers can't tell migrants worker to following command. Sixty-seven point six percent of heath care workers can't complete medical history which may result in wrong diagnosis and treatment. Cause of these problems rising from the difference of language and culture, in order that the way to resolve problems is to reduce communication problem by provide proper interpreter. The disease which is the most concerning is chronic infectious diseases (tuberculosis and AIDs). Because of tightly residence, low educated and poor

hygiene, so it is difficult in controlling disease. Moreover, there is a issue of medical treatment curse, the migrants worker don't have enough money to paid so they deny treatment. Hospital has to given them a priceless medicine (to prevent the spreading of the disease) which Thai government has to response these courses.

Conclusions : The problem of migrant worker patients is increasing so the hospital which is near community of migrant worker, entrepreneur and government should pay more attention and cooperate in solving problem. This research could be benefit to Thaluang Hospital and may adapt to use in other hospitals which effected same problem.

Key Words : ● *Migrant worker* ● *Health care worker* ● *Infectious disease*

Abstract no. 107**Type II Diabetic Mellitus Control Strategies in Hualam Health Promoting Hospital, Thaluang, Lopburi Province**

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Background : The amount of diabetic patients tends to increase every years, but the amount of doctors and medical officers aren't enough. These cause the patients have to wait for a long time to get service. In regards to these situations, the hospital establishes the diabetic patient-referring strategies for lessening the big amount of people at the hospital and creating more convenience thoroughly. However, Thaluang Hospital has never followed up and collected the data of the strategies how the diabetic patients who had received treatment was referred to primary care unit. Without any following up strategies, weather the patients could control the symptom of their sickness within appropriate level and wouldn't get complication, researchers have serious concern regarding such issue. Therefore, this study has been developed to use as a guideline for service development, controlling and healing diabetic symptom and help avoiding complication.

Objectives : To study and compare the results of diabetic Mellitus control strategies of before and after they are sent back to continue to have a treatment at Hualam primary care unit. To find the relation of factors in metabolic syndrome and diabetic control of the patients themselves.

Methods : Collecting the data at Thaluand Hospital and Hualum primary care unit by getting them from HosXP program data and blood test results and survey on 23th August 2011

Results : From 53 samples, equating to 86.8% of the total populations. In the result comparison found that there was not statistically significantly different in HbA1c and FBS before and after the samples receiving treatment. However, in the research blood pressure, before and after the samples receiving treatment, was significantly different. In regards to factor in diabetic mellitus control strategies, researchers found that the samples who were able to control their diastolic blood pressure at an appropriate level had 20.622 times better chance to keep the symptom under control than those who weren't able to control.

Conclusions : The result of referring to Tambon Hualam primary care unit found that there was not statistically significantly different in HbA1c and FBS before and after the samples receiving treatment. But Blood pressure tend to increase. Study of factor correlated with type 2 Diabetic Mellitus control found that diastolic blood pressure correlated with type 2 Diabetic Mellitus control.

Key Words : ● *Type 2 Diabetic Mellitus* ● *Primary care unit* ● *HbA1c*

Abstract no. 108**The Role of Youth and Factors to Participate in Community Development at Baan Mor, Tawung District, Lopburi Province**

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Background : The idea of public participation has been essentially involved in rural community development. Apart from the emphasize of the 5th to 10th National Economic and Social Development Plan on the idea. The latest plan has included the building of psychosocial development and public consciousness in adolescent to encourage them for the participation. Though the area which is authorized by Tawoong Hospital has the reputation of recreational drug users, there has been a group of youth gathered themselves as the TO BE NUMBER ONE club members and has won 3 annual awards. The study is for the role and factors to participate in community development from these youth. The results will be helpful in simultaneously generating the youth and community development.

Objectives : To study the roles of youth in community development and factors that encourages them to the participation in Baan Mor, Tawung district, Lopburi Province.

Methods : The study is conducted with qualitative study using in depth interview. This is the qualitative study choosing the study population by purposive sampling and collecting the data by in dept and informal interviews the questions are arranged in advanced for all case studies

Results : From the ten case studies, 40 percent are male and the other 60 percent are female. Among them, 80 percent are between 15-17 years old and 20 percent are between 17-25 years old. Eighty percent of the case studies are studying in secondary school while another 10 percent graduated from junior high school and the other graduated from high school. Eighty percent are in middle class families while the other 20 percent are from poor families. From the study there are subjects like the influence from families and friends, social problem, influences from school, public consciousness, location and environmental factors and self motivation and achievement that assumed to affect their decisions on the volunteering. Public consciousness is to have mercy and compassion for others without reward. For aspects of their duties, we found that they complete their own duties as good students or good apprentices. To others, they treat other people with respect, kindness, and generosity. Their social responsibilities reflect in their parts in community development workers and philanthropic events. For the country, they perform their duties as good citizen and observe the law. They are all Buddhist; behave themselves as a good Buddhist who follows religious precepts. For the royal family. They have loyalty and live their lives in

common way with sustainable growth.

Conclusions : From the study, factors to encourage the youths for the participation are family and friends, education, their society, location and environmental factors, and self motivation. This let them know their roles are important to the community as good sample for others. All these can be used as tools for the primary prevention keeping them out of drug abuse. These roles are guided with instructions from the respectful elders and educators in all aspects. Their participation in social work leads to the better community.

Key Words : ● *Role* ● *Youth* ● *Duty* ● *Community development*

Abstract no. 109**Factors Affecting Attitudes Towards Selection of Original Drugs and Generic Drugs of Health Professionals in Thawung Hospital**

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Background : Current cost of medical care is increasing at all time. The use of generic drugs, especially in the Universal Coverage scheme, can save budget for the country. In practice, it is found that medical personnel understand and value differently about drug usage. There is an intention to use original drugs rather than generic drugs. At present the Food and Drug Administration has supported the use of generic drugs in order to lowering the cost of treatment and health services and gaining accessibility to the Thais.

Objectives : To study what factors affecting the attitudes of medical personnel in Thawung hospital, Thawung district, Lopburi province in the use of generic and original drugs.

Methods : We conducted qualitative study. In-depth interviews were conducted. Questions about factors affecting attitudes to drug use generic drugs or underlying medical personnel including medical care and pharmaceuticals in Thawung hospital were asked.

Results : Most medical personnel in Thawung hospital have had different understandings of both generic and original drugs use in their hospital. The study found that there were misconceptions on these copy right and manufacturing. They perceived that the original drug is a drug manufactured in a foreign country whereas mimic drugs are those produce within the country. Most participants have more confident in the performance of the drugs labeling as foreign produced drug rather than the Thai standard use to evaluate the performance of the drug. Each health profession uses different criteria to decide the effectiveness of drugs. Medical doctors focused on clinical trial. The pharmacists focused on the bioequivalence and manufacturers. Nurses used experience of using drugs. Most medical professionals used the original drug despite the fact that it has higher prices.

Conclusions : Medical personnel in Thawung hospital have had more confidence when using original drugs rather than the generic drugs. Decision making to use drugs remains unclear and has no common criteria among medical professionals.

Key Words : ● Drug use ● Original drug ● Generic drugs ● Medical personnel

Abstract no. 110**Benefits from Meditation Program on End Stage Cancer Patients
at Thawung Hospital**

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Background : Recently, we have known that the meditation including, prayer, chant and faithfulness can relieve the anxiety effectively. Though meditation is usually recognized as a largely spiritual practice, it also has more health benefits. For Meditation therapy program, this is by far the way to make favorable disease declination perfectly. Therefore, the purpose of our research is to study in particularized profundity about advantage of program. Also, this is the method of what the way development further.

Objectives : To study how extensive the benefits of Meditation therapy program in patient end stage cancer disease and to study what the patients expect program to their life, particularly, the recommendation that suggest to the program.

Study Design : Qualitative study and in depth interview.

Materials and Methods : A qualitative study using in depth interviews was conducted. Eighteen project members in meditation therapy participated and maintained their program at least a month as well as a willingness to cooperate, including advice and recommendations to the project in the future, were asked.

Results : The qualitative research found that the majority of benefits of project focused on therapy more than one aspects by different individuals, which can be classified into 6 areas: At first part is to help adjust the equilibrium of the body to normal as well as the heart rate including respiration slow down, helps muscles relax. This also decreases in a use of analgesics and relieves headaches. Cancer patients suffering with symptoms also believed that meditation can improve their symptoms better than a specific drug treatment. Finally, it can solve sleep problems. In terms of further recommendations, they commented that the project had similar ideas about applying this knowledge to the benefit of other diseases.

Conclusions : It was found that meditation has health benefits in the end stage care, particularly symptomatic relieves. Combing this ideation with religious such as Buddhism could be more effective. Hence, the project should continue and be expanded to benefit in treatments of other diseases, particularly forming the standard long term meditated guideline projects as well.

Key Words : ● *Meditation program* ● *End stage cancer patients*

Abstract no. 111**The Control of Blood Pressure in Hypertensive Patients Who Visit at Thawung Hospital, Thawung District, Lopburi Province**

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Background : Hypertension is a chronic disease. It can either be preventable or slow its progression. The achievement of prevention is depended on the patient's concerns. From the statistical data that collected by Thawung hospital, the number of hypertensive patients visited this hospital are more than 5,000 or about 10% of population in Thawung district, Lopburi province.

Objectives : To study the prevalence of hypertensive patients that visit at Thawung Hospital, Thawung district, Lopburi province and to study factors related to controlling the blood pressure in hypertensive patients visited at Thawung Hospital, Thawung district, Lopburi province

Study Design : Cross-sectional analytic study.

Materials and Methods : Questionnaires on demographic data, knowledge and health behavior about hypertension were conducted in well-controlled and above 35 years old poor hypertensive patients who were diagnosed more than 1 year and visited at Thawung Hospital, Thawung district, Lopburi province more than 1 year.

Results : The sample population was a more than 60 years old group. Majority of total were female, married, primary education level, no income, and not smoking. Of total only 59.9% can control blood pressure. Most of the participants had low level of hypertension related knowledge score (79%). Of total 95.6% of participant health behaviors were rated at medium level. It was found that there are association among members in family, no salted diet and the measurement of blood pressure regularly at p-value 0.027, 0.015, 0.016 respectively.

Conclusion : The well-controlled hypertensive patients at Thawung Hospital were at 59.5% and the factors related in control blood pressure were low salt diet intake and the closed follow-up of blood pressure.

Key Words : ● Blood pressure ● Hypertensive

Abstract no. 112**Factors Affecting a Completion of Amphetamine Detoxification Program of Thawung Hospital**

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Background : Since the Thai government announced a radical shift in drug addiction related policy with the implementation of a War on Drugs Project. The government has assigned the Ministry of Public Health as one of the main agencies responsible for managing treatment and rehabilitation strategies for patients with drug addiction. Thawung Hospital, Thawung district, Lopburi has realized for these problems and established detoxification program known as “Palang Phranalai”. In a period of 4 months in fiscal year 2006 implementation, there were 188 amphetamine addicts participated. The number of those who completed the amphetamine detoxification program is only 30.2 percent. This study seeks to determine factors associated with the completion of detoxification program.

Objectives : To study factors affecting a completion of amphetamine detoxification program, department of family and community medicine, Thawung hospital at Thawung district, Lopburi.

Study Design : Mixed methods model included qualitative study and quantitative study.

Materials and Methods : Quantitative studies collected data by case series using secondary data from a report on treatment of substance abuse, Department of health service support, Ministry of Public Health, Thailand. Qualitative study, purposive sampling and in-depth interviews, had also been conducted.

Results : A quantitative analysis of patients completing the program found that the majority of patients were male, 10-19 years old, not married, the highest level of education was classified as elementary level, worked and had revenues of less than 6,000 baht per month. Lower than 15 years old and more than 20 years old were the age that first amphetamines used. Furthermore, patients, who have never been treated before, are more likely to receive treatment completely than those who have not. It was found that those who intended to quit by themselves were more likely to complete the program than those forced by society. Using of amphetamines 2 tabs each time, 1 time per week and less than 5 years was found associated with an accomplishment of detoxification program. We found no significant association between all these factors. Aspects of qualitative study, the most common reason that people come to treatment in first time treatment was forced by law but felt valuable and conformity were the factors affecting a completion of amphetamine detoxification program as a motive to receive treatment in time.

Conclusion : A quantitative study found that no significant association between factors and a completion of amphetamine detoxification program because there were several limitations to these findings as the homogeneous population, small sample and data prior treatment that was not given cause-and-effect relationships between factors and a success of the program. In the other hand, the qualitative study indicated that felt valuable, conformity and treatment was forced by law emerged as factors affecting a completion of amphetamine detoxification program. For further study, the data should be given among the ongoing program and also considered in other social aspects.

Key Words : ● *Amphetamine detoxification program* ● *Substance abuse* ● *Completion of treatment*

Abstract no. 113**Laboratory Predictors of Dengue Shock Syndrome during the Febrile Stage**

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Abstract : The clinical manifestations of dengue hemorrhagic fever (DHF) consist of three successive stages: febrile, toxic, and convalescent. The toxic stage is the critical period, which may manifest as circulatory disturbance or even profound shock in some patients. We attempted to determine predictors for risk of dengue shock syndrome (DSS) during the febrile stage. One hundred one children with acute febrile illness were enrolled in the study, with a mean age of 11 years old. The diagnosis included dengue fever (DF) 21 cases, DHF grade I 30 cases, DHF grade II 33 cases, DHF grade III and IV 10 cases; children with other febrile illness (OFI) 7 cases were used as controls. Complete blood counts, coagulation test von Willebrand factor antigens (VWF:Ag) and ristocetin cofactor activity (VWF:Rcof) were determined daily during hospitalization and 2-4 weeks after discharge from the hospital. The results revealed any one of the following abnormal laboratory findings during the febrile stage served as a predictor for risk of DSS: increase in hematocrit > 25%, a platelet count < 40,000/ul, an activated partial thromboplastin time > 44 seconds, a prothrombin time > 14 seconds, a thrombin time > 16 seconds or a VWF:Ag or VWF:Rcof > 210%. The relative risk ranged from 4.8 to 10.9. Simple laboratory investigations with complete blood count, coagulation test or the more sophisticated von Willebrand factor, are helpful in predicting the risk for DSS during the febrile stage.

Key Words : ● *Dengue shock syndrome* ● *Dengue hemorrhagic fever* ● *Predictors*

Abstract no. 114**Detection of D-elute Phenotype in Thai RhD-negative Blood Donors
by Adsorption-elution Test****Songsak Srijinda¹, Chamaiporn Suwanasophon², Malinee Pongsavee³
and Unchalee Visawapoka⁴**¹*Division of Blood Bank, Department of Pathology, Phramongkutklao Hospital;*²*Division of Immunology, Department of Clinical Pathology, Army Institute of Pathology;*³*Faculty of Allied Health Sciences, Thammasat University;*⁴*Department of Biochemistry, Phramongkutklao College of Medicine*

Background : The Rhesus (Rh) blood group is the most polymorphic human blood group system, and it is clinically significant in transfusion medicine. About 0.1 to 0.5% of Asian people are RhD-negative, whereas in the Thai population, the RhD-negative blood type only occurs in 0.3%. However, approximately 10 to 30% of apparently RhD-negative in Eastern Asian people actually were D-elute (DEL) phenotypes, the very weak D antigen that cannot detect by indirect antiglobulin test (IAT).

Objective : To detect DEL phenotype in Thai RhD-negative blood donors.

Materials and Methods : In this study, a total of 254 Thai serologically RhD-negative blood donors by IAT were tested for RhCE phenotypes by tube test and DEL phenotype by anti-D adsorption-elution test.

Results : The RhD-negative phenotypes consisted of 131 ccee, 4 ccEe, 1 ccEE, 101 Ccee, 16 CCee, and 1 CcEe. Among them, 42 Ccee and 8 CCee were typed as DEL phenotype.

Conclusion : Approximately 20% of apparently Thai RhD-negative individuals were DEL phenotype and found only in RhC (+) phenotype samples.

Key Words : ● DEL ● Thai ● RhCE phenotypes ● Adsorption-elution test

Abstract no. 115**The Study of the Footprint of Anterior Cruciate Ligament
in Thai Population : A Human Cadaveric Study****Auttaphon Arkasihayuth, Nattha Kulkamthorn, Korakot Charakorn, Manop Chaimati****Piyanee Sriya and Niwat Reeboonlap***Department of Anatomy, Phramongkutklao College of Medicine, and Department of Orthopaedics, Phramongkutklao Hospital*

Purpose : Identification of the anterior cruciate ligament (ACL) footprint is critical for anatomical ACL reconstruction. The osseous landmark of the ACL footprint is one of the methods that can be used to determine the ACL insertion site. The size of ACL footprint on femur and tibia also is important for surgical decision. The purpose of this study represents the existing of osseous land mark and size of ACL footprint in Thai people.

Study Designs : Cadaveric Study.

Methods : Thirty-eight paired and 1 nonpaired of cadaveric knees (77 knees). All cadaveric knees of Phramongkutklao College of Medicine were dissected to identify bony landmark of ACL at both tibia and femur attachment, and to detect Resident's ridge and Lateral bifurcate ridge. The size of ACL footprint on tibia and femur were measured and recorded by length and width.

Results : The study found Resident's ridge, 75/77 knees (97.40%) and Lateral bifurcate ridge (bony landmark between anteromedial and posterolateral bundle), 50/77 knees (64.94%), *In male*, the size of ACL at right femur attachment, width 10.03 ± 1.10 mm. length 12.77 ± 1.27 mm. At right tibia, width 11.49 ± 1.30 mm. length 17.16 ± 1.00 mm. At left femur, width 9.94 ± 1.60 mm. length 12.59 ± 1.69 mm. At left tibia, width 11.14 ± 1.52 mm. length 16.52 ± 1.07 mm. *In female*, the size of ACL at right femur attachment, width 8.63 ± 0.69 mm. length 10.82 ± 0.95 mm. At right tibia, width 10.11 ± 0.62 mm. length 12.60 ± 1.21 mm. At left femur, width 8.59 ± 0.87 mm. length 10.54 ± 1.26 mm. At left tibia, width 10.09 ± 1.19 mm. length 12.37 ± 0.98 mm.

Conclusions : The study of ACL footprint in Thai people shows the Lateral bifurcate ridge represent 64.94%, Resident's ridge as 97.40%. The average size of ACL tibial footprint among Thai female are smaller than 14 mm. So the single anatomical ACL reconstruction may be preferred than double-bundle technique. In the other hand, the average size of ACL insertion in Thai male is greater 14 mm, so that double bundle technique could be preferred. These findings may assist the orthopedist to identify ACL footprint in Thai population even more accurately.

Key Words : ● Anterior cruciate ligament reconstruction ● Resident's ridge ● Lateral bifurcate ridge
● Bony landmarks

Abstract no. 39

Correlation between Grading of Trigger Finger and Postoperative Range of Motion

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Back ground : Trigger finger is very common problem seen by orthopedic surgeon. Non-operative treatment is the first line modality and surgical release is indicated for failed nonoperative treatment or severe cases with flexion deformity. There are no study in the literature reporting different grading and clinical outcome. The purpose of this study was to found correlation between grading of trigger finger and postoperative range of motion

Material and Method : Ninety-five trigger fingers and thumb which failed nonoperative treatment were classified grade based on Green classification and measured range of motion in each patient preoperative. Open A1 pulley release was performed by hand surgeon and postoperative range of motion were measured at day 1, week 2, 6 and 3, 6 months postoperative. Different preoperative and postoperative range of motion was calculated and compared between different grading.

Result : All 95 trigger digits and thumb which performed open surgery. Based on classification by Green; Grade II 44.2%, III 29.5%, IV 26.3%. Mean different preoperative and postoperative range of motion were significantly between grade II and IV however not significantly between other grading. Mean different preoperative and postoperative visual analog scale were not significantly between different grading. All complication at 6 months postoperative were stiffness 9.5% and no serious complication were observed.

Conclusion : Mean different preoperative and postoperative range of motion are significantly between grade II and IV and result of open A1 pulley release is highly effective with low complication rate.

Key Words : ● *Trigger finger* ● *Range of motion*

