

การนำเสนอผลงานวิจัยทางการแพทย์
ณ ห้องประชุม พล.อ.อ.ประพันธ์ ฐปะเตมีย์ ชั้น 3 อาคารคุ้มเกล้าฯ

วันศุกร์ ที่ 20 มีนาคม 2563 (0900 - 1200)

ประธาน : น.อ.สินาท พรหมมาศ

ประธานร่วม : น.อ.หญิง ศศวรรณ ชินรัตน์พิสิทธิ์

Prevalence of Resident's depression in Bhumibol Adulyadej Hospital

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Background : Residents are exposed to numerous stressors during their post-graduate training which affects them both physically and emotionally. Depression among residency training has been shown to be associated with career burnout, medical errors, lower quality care, motor vehicle crashes and suicidal thoughts. Early detection of depression in residents and immediately intervention, those could increase the work efficiency and prevent undesirable consequences.

Objectives : To determine the prevalence and associated factors of depression among residents in residency training program at Bhumibol Adulyadej Hospital, RTAF.

Material and methods : A cross-sectional descriptive study was performed in all residents in training at Bhumibol Adulyadej Hospital between 2018 and 2019. A self-report questionnaire was administered and the Patient Health Questionnaire Thai-version (PHQ-9 Thai-version) was used to assess the prevalence of depression. A PHQ-9 Thai-version score of 9 or greater indicates high likelihood of depressive disorder. The associations between factors and depression were analyzed by Fisher's exact, chi-square and multiple logistic regressions.

Results : A total of 177 residents were participated in this study. The prevalence of the resident's depression was 14.7 % (PHQ-9 \geq 9). Factors associated with depression were having underlying disease (P = 0.008), first year of residency training (P = 0.028), making a wrong decision to do training (p < 0.001), thinking to quit from resident training (P = 0.004) with adjusted OR (95 %CI) 4.03 (1.50-10.83), 2.55 (1.09-5.99), 6.74 (2.44-18.59), 3.32 (1.41-7.79), respectively.

Conclusions : The prevalence of depression of residents who have trained in Bhumibol Adulyadej Hospital had lower rate 14.7 %, compare with previous studies (20.9 - 43.2 %, average 28.8 %).

Keywords : Residency training, Resident, Depression, Prevalence.

Validity and Reliability of Contraceptive Knowledge Assessment Tool – Thai version

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Background : Teenage or adolescent pregnancy is one of the public health problems. Sex education can be taken as a factor which could help in reduction of teenage pregnancies. Unless, there is no other valid and reliable tool to assess the successful dissemination of sex education.

Objective : To translate the contraceptive knowledge assessment tool into Thai and assess for validity and reliability.

Material and methods : The translation and cross-cultural adaptation was performed. The validity was tested using internal validity index. The reliability was evaluated via test-retest reliability test and was calculated using Pearson product moment correlation.

Results : The contraceptive knowledge assessment tool was translated without any major change. The item-level content validity index (I-CVI) was 0.992 (> 0.67) and scale-level content validity index (S-CVI) was 0.999 (> 0.9). A total of 145 participants were included in test-retest reliability testing and Pearson product moment correlation was 0.55 (acceptable level).

Conclusions : The contraceptive knowledge assessment tool - Thai version is valid, reliable and convenient for using to evaluate the knowledge about sexual health in participants aged above 10 years.

Keywords : *Teenage pregnancy, contraceptive knowledge, assesment tool.*

Influence of Aneurysm Angle on the Incidence and Risk of Ruptured Aneurysm

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Background : cerebral artery aneurysms is mostly found among western people: 6-8 per 100,000 people. Rupture cerebral aneurysm is a catastrophic. It has been found that 30 % of patients die before admitting or shortly after admitting.

The appearances which cause ruptured aneurysms are sizes, position, aspect ratio assessments and types of cerebral artery aneurysms. However, researches about angles of aneurysms measurement for ruptured possibility have not yet existed, it has come to start this study.

Material and methods : prospective study was used in this research. Between January 2018 to December 2019, patients were diagnosed at Bhumibol Adulyadej Hospital by an X-ray and a cerebral angiography, the angles of both ruptured aneurysms patients and unruptured aneurysm patients were measured by the computer program.

Results : 201 cerebral aneurysms patients participated in the study were divided into 138 females, 63 males and 13 unqualified subjects. There were 188 eligible for the study; 149 ruptured aneurysms patients and 39 unruptured aneurysms patients. In consequence of measuring, the angle of ruptured aneurysms seemed mostly to be an obtuse angle (approximately 123.2°) and an acute angle for unruptured aneurysms (approximately 74.4°).

Conclusion : As a result of the study, the obtuse angle of cerebral aneurysms ($\geq 90^\circ$) is riskier to rupture than the acute angle ($< 90^\circ$).

Keyword : *Aneurysm Angle, Risk of Ruptured Aneurysm.*

Prevalence of Vitamin D Deficiency and Efficacy after Vitamin D Supplementation in Very Low Birth Weight Infants

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Background : Very Low Birth Weight (VLBW) preterm infants are at high risk for vitamin D deficiency (VDD) defining as serum 25-hydroxyvitamin (OH) D levels <20 ng/ml. The recommendations of vitamin D supplementation vary among different guidelines and the true efficacy of vitamin D status is unknown, so this study was initiated.

Objective : To evaluate the prevalence of VDD after vitamin D supplementation in VLBW infants at 36 weeks Post Conceptual Age (PCA 36 weeks).

Material and method : Prospective descriptive study of serum 25(OH)D of VLBW infants with gestational age ≤ 32 weeks and birth weight $\leq 1,500$ grams, admitted in Bhumibol Adulyadej Hospital between October, 2017 and December, 2019 were obtained at birth. After vitamin D 400-800 IU/day supplementation, serum 25(OH)D, calcium, phosphorus and alkaline phosphatase were measured at 2 weeks, 4 weeks and PCA 36 weeks.

Results : Forty-eight infants were analyzed. The prevalence of VDD infants at birth, 2 weeks, 4 weeks and PCA 36 weeks were 45.8 %, 6.2 %, 0 %, and 2.0 %, respectively. The maternal VDD is significantly related to vitamin D level at birth.

Conclusion : VDD infants with vitamin D 400-800 IU/day supplementation were able to achieve vitamin D >20 ng/ml and sustain vitamin D status throughout the study period.

Keywords : *Vitamin D deficiency, preterm, supplementation.*

ผลของยาขับเหล็กในผู้ป่วยโรคธาลัสซีเมียที่มีภาวะเหล็กเกิน

อรสิริ พชรธนาสาร พบ.

กองกุมารเวชกรรม, โรงพยาบาลภูมิพลอดุลยเดช, กรมแพทย์ทหารอากาศ

ที่มาของการศึกษา : เนื่องจากปัจจุบันมีผู้ป่วยเด็กโรคธาลัสซีเมียที่มีภาวะเหล็กเกิน ซึ่งได้รับการรักษาด้วยยาขับเหล็กแล้ว ระดับ serum ferritin ยังมีค่าสูง ซึ่งอาจส่งผลทำให้มีการสะสมของเหล็กในหัวใจและตับ ตลอดจนส่งผลกระทบต่อการทำงานของการทำงานของอวัยวะดังกล่าว และในโรงพยาบาลภูมิพลอดุลยเดช ยังไม่มีผู้ทำการศึกษามาก่อนหน้านี้ จึงเป็นที่มาของการศึกษาวิจัยครั้งนี้

วัตถุประสงค์ : เพื่อทราบถึงผลของยาขับเหล็ก ประสิทธิภาพและผลข้างเคียงของการใช้ยาขับเหล็กตลอดจนพฤติกรรมมารับประทานยาขับเหล็กและการดูแลตัวเองของผู้ป่วยธาลัสซีเมียผู้ป่วยเด็กและวัยรุ่นโรคธาลัสซีเมียของโรงพยาบาลภูมิพลอดุลยเดช

วิธีการศึกษา : การวิจัยเชิงพรรณนา รวบรวมข้อมูลของผู้ป่วยโรคธาลัสซีเมียที่มีภาวะเหล็กเกินที่มีอายุระหว่าง 2-25 ปี ติดตามผลของยาขับเหล็ก โดยติดตามผลของค่า serum ferritin หลังได้ยาขับเหล็กเป็นระยะเวลา 1 ปี และ 5 ปี ของผู้ป่วยนอกกองกุมารเวชกรรมทุกรายในคลินิกโรคธาลัสซีเมีย โรงพยาบาลภูมิพลอดุลยเดช ตั้งแต่ 1 มกราคม 2553 ถึง 31 ธันวาคม 2562

ผลการศึกษา : ผู้ป่วยที่ได้เข้าเกณฑ์ทำการศึกษาทั้งสิ้น 52 คน พบว่าค่า serum ferritin ก่อนได้รับยาขับเหล็ก 1358.6 ± 188.4 ng/ml, หลังได้รับยาขับเหล็ก 1 ปี เฉลี่ย 1842.7 ± 255.5 ng/ml, และหลังได้รับยาขับเหล็ก 5 ปี เฉลี่ย 2473.6 ± 343.0 ng/ml โดยเพิ่มขึ้นเป็นร้อยละ 35.6 และ 82.1 ตามลำดับ ซึ่งไม่พบปัจจัยที่มีความสัมพันธ์กับการเพิ่มขึ้นของ serum ferritin ที่ 1 ปี และ 5 ปี ผลการศึกษาจำแนกตามการให้ยาแบบ combination drug พบว่าค่า serum ferritin หลังใช้ยาขับเหล็กเป็นระยะเวลา 1 ปี ลดลงได้เฉลี่ยร้อยละ 24.8 ถึง 38.2 พฤติกรรมการรับประทานยาขับเหล็กและการดูแลตัวเองของผู้ป่วยธาลัสซีเมียอยู่ในเกณฑ์ดี ผลข้างเคียงของการใช้ยาขับเหล็กมีเพียงเรื่อง transaminitis ร้อยละ 7.6

สรุปผลการศึกษา : การศึกษาวิจัยครั้งนี้แสดงให้เห็นว่าในทางปฏิบัติผลการรักษาภาวะเหล็กเกิน โดยการให้ยาขับเหล็ก พบว่าระดับ serum ferritin ยังมีค่าสูงขึ้นหลังได้รับการรักษา ซึ่งแสดงถึงการตอบสนองของยาที่ไม่ดีเท่าที่ควรแม้ว่าจะศึกษาในโรงพยาบาลระดับตติยภูมิแล้วก็ตาม แต่อย่างไรก็ตามจะเห็นได้ว่าในผู้ป่วยที่ได้รับยาเดี่ยวมีระดับค่า serum ferritin ที่สูง การให้ยาแบบ combination drug สามารถลดระดับค่า serum ferritin ลงได้อย่างชัดเจนใน 1 ปี ดังนั้นจากการศึกษานี้จึงแสดงให้เห็นว่าการให้ยาในรูปแบบ combination drug ควรได้รับการพิจารณาใช้กับผู้ป่วยให้เร็วขึ้นในผู้ป่วยที่ได้รับยาเดี่ยวและยังมีระดับค่า serum ferritin ที่สูง

Comparison of Blood Lactate Level Obtained with and without Tourniquet in Patient Who Likely to have Sepsis and Septic Shock

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Background : Blood lactate level measurement is a standard investigation in the cases are suspected sepsis and septic shock. In obtaining the blood sample, using a tourniquet is avoided, as it is believed that the use of tourniquet falsely elevated the lactate levels.

Objective : To compare the lactate levels in two sets of the blood samples that were obtained with and without using a tourniquet from patients with suspected sepsis and septic shock.

Material and methods : This prospective cohort study was conducted on emergency department patients with suspected sepsis and septic shock at Bhumibol Adulyadej Hospital. The blood samples were obtained twice from each patient. The first blood draw was conducted without using a tourniquet, and the second one was conducted with a tourniquet. Other tests were obtained with second lactate. Lactate blood test and other tests were performed, and the lactate levels of each pair of samples were recorded. The data was then analyzed using SPSS.

Results : The total number of participants is 94. The samples obtained without a tourniquet has the mean lactate level of 3.14 ± 2.88 mmol/L and the ones obtained with a tourniquet has the mean lactate level of 3.23 ± 2.96 mmol/L. The difference is statistically significant at p value = 0.020. In positive blood culture group, samples obtained without a tourniquet has the mean lactate level of 4.51 ± 4.80 mmol/L and the ones obtained with a tourniquet has the mean lactate level of 4.66 ± 4.90 mmol/L, P value = 0.041. The result has significant different in the mean lactate level respectively.

Conclusions : Using a tourniquet to obtain results in the falsely elevated lactate levels, so when testing for lactate levels, the blood sampling should be done without using a tourniquet because it is likely to give the most accurate results.

Keywords : *lactate, tourniquet, sepsis and septic shock.*

Accuracy of Rapid Influenza Test (Sofia influenza A+B FIA) Compare with Real-Time PCR Test in Bhumibol Adulyadej Hospital

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Background : Influenza is a respiratory infection disease affected at all ages and may responsible for high morbid-mortality. Influenza detection need quick and simplified rapid test to determine the accuracy of the assays in the Bhumibol Adulyadej Hospital. All Sofia Influenza A+B FIA was to compare the detection of influenza with RT-PCR method to test %sensitivity %specificity %PPV %NPV and the results will be useful to indicate for proper and prompt treatment.

Objective : Study the accuracy of rapid influenza test (Sofia Influenza A+B FIA) compare with real-time PCR test in Bhumibol Adulyadej Hospital.

Material and method : A Single Center Diagnostic, Cross-sectional Study. Sofia influenza A+B FIA brand and RT-PCR form patients who visited Bhumibol Adulyadej Hospital, with suspected clinical influenza. Sample were collected between October to November 2019. The Island's Statistical Chi-square test to determine the relationship of these two methods, the confidence level of 95 %.

Results : The results of the analysis of the results of assays Rapid test All Sofia Influenza A+B FIA compared to RT-PCR showed that the results of both methods correlated significantly statistical confidence level of 95 % (p. <0.05) Rapid test kits detect all Sofia Influenza A+B FIA is sensitivity 63.64 %, specificity 100 %, PPV 100 % and NPV 76.12 % which is in line with international standards set. Therefore, the Sofia Influenza A+B FIA rapid test is valid to be use in Bhumibol Adulyadej Hospital for diagnose Influenza.

Keyword : *Influenza, SOFIA (Rapid tests), RT-PCR, Bhumibol Adulyadej Hospital.*

A Comparative Study of Acetar Solution and Normal Saline in Diabetic Ketoacidosis Patients

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Background : Diabetic ketoacidosis is life-threatening complication of diabetes mellitus which require prompt treatment with large volume crystalloid fluid administration. A variety of crystalloid fluids is currently available for use differs in their composition and ion concentrations. While there are potential pros and cons for different crystalloid fluids, it remains unknown if any particular fluid confers a clinical outcome benefit over others in the treatment of diabetic ketoacidosis.

Objective : To compare the changes in acid-base balance and clinical outcomes in diabetic ketoacidosis patients who was given different solution substitutes between Acetar solution and normal saline solution.

Material and method : Single center prospective single-blind randomized control trial. Data was collected for diabetic patients with acidosis who received treatment at the emergency room, Bhumibol Adulyadej Hospital from August 2018 to September 2019.

Results : Total of 56 patients were divided into 26 received Acetar solution patients and 30 received normal saline solution patients. It was found that the change in acid-base balance were not different. The changes in potassium chloride and bicarbonate were not different. The treatment time of both solutions was almost the same. Patients using Acetar solution take 20.61 hours, and patient using normal saline takes 20.40 hours, p-value 0.939. The length of stay of acetar solution is less than normal saline solution. (Acetar solution 9.73 days, normal saline solution 12.83 days, p-value 0.084)

Conclusion : This study failed to indicate benefit using Acetar solution compared to normal saline solution regarding time to normalization of pH in patients with DKA.

Keywords : *Diabetic ketoacidosis, Acetar solution.*

High Dose Intravenous Vitamin C as An Adjuvant Therapy in Patient with Septic Shock: Preliminary Analysis

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Objective : Several previous studies suggest that intravenous vitamin C may positively impact the reducing of reactive oxygen species and severity of multi-organ failure in critical-illness patients. The objective of this study was to determine the effect of intravenous vitamin C on mortality and severity in patients with septic shock.

Material and method : Twenty patients with septic shock who presented at the emergency department of Bhumibol Adulyadej Hospital were randomized 1:1 to receive intravenous vitamin C 1.5 gm every six hours for four days or placebo. The primary outcome was twenty-eight-day all-cause mortality. The secondary outcome was the change in mean Sequential Organ Failure Assessment score (range from 0 to 24, higher scores mean more severity) from baseline to four days after intravenous vitamin C or placebo were administered. This study was conducted from November 2018 to November 2019.

Results : Among twenty randomized patients, there were neither significant different between the vitamin C and placebo groups in the primary outcome of twenty eight-day all-cause mortality (20 % in the vitamin C group and 20 % in the placebo group, $p=1.000$) nor the secondary outcome of the change in mean Sequential Organ Failure Assessment score from baseline to four days (0, -1.7, -0.9, -2.9, -2.7 [from baseline to day 1-4 respectively] in vitamin C group and 0, -0.5, 0.2, -1.1, -1.7 [from baseline to day 1-4 respectively] in placebo group, $p=0.601$)

Conclusion : In this preliminary study, intravenous vitamin C compared with placebo did not significantly improve twenty-eight-day all-cause mortality and Sequential Organ Failure Assessment score. Further study is needed to evaluate the role of vitamin C in septic shock. Trial registration: Clinicaltrials.in.th identifier TCTR20180925004

Keywords : *Vitamin C, Sepsis, Septic shock.*

Randomized Controlled Trial of Fluoxetine or Placebo on Quality of Life after Acute Ischemic Stroke

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Background : Acute ischemic stroke is a leading cause of life-altering disability and death among the Thai population. Depression is a significant sequela of stroke which negatively impacts not only physical recovery, but also the quality of life of stroke survivors. Fluoxetine has been involved in numerous studies in improving functional recovery and preventing post-stroke depression, but with limited findings on the quality of life of stroke patients receiving Fluoxetine. This current study strived to ascertain the effects of Fluoxetine on the quality of life of patients with acute ischemic stroke following discharge.

Material and methods : A prospective, double blinded, randomized controlled trial was conducted at Bhumibol Adulyadej Hospital (Bangkok, Thailand) among 60 patients of consenting age admitted with acute ischemic stroke between April 2019 – March 2020. Patients with a diagnosed mental illness, complications following ischemic stroke, inability to communicate, or had high scores on depression screening tools were excluded. Enrolled patients were given either Fluoxetine or a matching placebo upon discharge to take once daily for 90 days. They were also scheduled for assessments of quality of life, depression screening, and stroke evaluation at one month and three months following discharge. As of December 2019, 34 patients have been enrolled and followed up at the outpatient department. The primary outcome is the proportion of patients who have a clinically significant improvement (≥ 0.1) of quality of life at 3 months as measured by EQ-5D-5L. Quality of life as measured by the modified Rankin score (mRS) and incidence of depression as monitored by the 9Q questionnaire were studied as secondary outcomes. Proportional variables were compared using Chi-squared test and Fisher's exact test and continuous variables were compared using T-test or Mann Whitney U test where appropriate. Statistical analyses were carried out using SPSS version 19.

Results : An interim analysis was planned after the complete follow up of 30 patients. A total of 34 patients were enrolled in which 3 patients were lost to follow up (1 from the Fluoxetine group and 2 from the placebo group). Patient baseline characteristics including age, sex, body mass index, and alcohol and tobacco usage were not significantly different between the two groups. Baseline EQ-5D-5L, EQ-VAS, hospital anxiety and depression scale (Thai-HADS), and modified Rankin score (mRS) were similar between the two groups, while 9Q scores in the placebo group (mean=4) was significantly greater although not exceeding the cut-off point for a positive screening of depression ($p=0.015$). Improvements of EQ-5D-5L scores at the final follow up for patients receiving Fluoxetine were higher than those receiving placebo (75 % vs. 46.7 %), but were not statistically significant ($p=0.106$). Proportions of patients with $mRS \leq 2$ at 3 months were not significantly different between the placebo and the Fluoxetine group ($p=1.0$). A greater proportion of patients in the placebo group had a 9Q score of > 7 at the final visit as compared to the Fluoxetine group (33.3 % vs. 18.75 %). No major adverse effects accountable to Fluoxetine were observed.

Conclusion : In this interim analysis, prescribing Fluoxetine to patients after acute ischemic stroke revealed a positive improvement of quality of life compared to placebo, although improvements of functional outcomes were equivocal. The incidence of higher depression screening scores was greater in patients who received placebo, suggesting Fluoxetine as a potential agent for the prevention of post-stroke depression.

Keywords : Ischemic stroke, depression, Bhumibol Adulyadej Hospital.

The Comparison of Rapid Sequence Intubation <RSI> versus Non-RSI at Emergency Room in Bhumibol Adulyadej Hospital

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Objective : To compare the first intubation success rate, the time taken to intubate and incidence of complications in patients undergoing rapid sequence intubation (RSI) with those intubated with non-RSI technique in non-traumatic patients at our emergency department.

Material and method : A cross sectional analytic study of intubation in 84 adults in Bhumibol Adulyadej Hospital, between 1st August 2019 – 30th November 2019, 44 underwent intubation with RSI technique and 40 with non-RSI. Patient's demographic details, indication of intubation, first intubation, intubation technique, open mouth to tube time, numbers of attempts, and immediate complications were recorded. Data were analyzed by mean, standard deviation, median, IQR, percent, frequencies, and logistic regression analysis.

Results : Intubations with RSI had a higher success rate on first attempt compared to those with non-RSI {86.36 % vs. 65 %, p value 0.022 or Odds ratio 3.41 (95 %CI 1.16-10.03, P-value 0.026)} and the incidence of immediate complications was significant lower in RSI group (22.73 %) than the non-RSI group (62.5 %, p value 0.005). By contrast, the open mouth to tube time did not differ significantly between RSI and non-RSI technique (RSI group 33.52 seconds, IQR 14.5-54.5 and non-RSI group 43.91 seconds, IQR 15-60, p value 0.211).

Conclusion : Using RSI had a higher success rate on the first attempt and reduced incidence of complications compare with non-RSI techniques.

Keywords : RSI, rapid sequence induction and intubation, airway management.

Effects of High Dose Continuous Albuterol Nebulization Compared to Low Dose in Children with Asthma

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Background : Acute asthma exacerbation is one of the most common pediatric emergencies, causing several major consequences in children and families. Nebulized albuterol is a β_2 -agonist, approved in children for both intermittent and continuous nebulization with various adverse effects. The dosage of albuterol remains widely variable without clear evidence comparing different recommended doses.

Objectives : To determine the efficacy and safety of high-dose (10 mg/hr) continuous albuterol compared to low dose in children admitted with status asthmaticus.

Material and methods : The quasi-experimental cohort study was performed at inpatients ward and PICU of Bhumibol Adulyadej Hospital. Eligible subjects included children, 2 to 15 years, admitted with status asthmaticus. 14 patients were received 10 mg/hr. continuous albuterol nebulization with serial evaluation. In control group, 13 patients' data received low-dose continuous albuterol were collected retrospectively from chart review.

Results : High-dose group used lesser duration of continuous nebulization therapy than low-dose regimen (37 hr. [IQR, 29-68.5 hr.] and 114 hr. [IQR, 64-152 hr.] respectively) (p 0.001). This study also showed a better in Siriraj asthma score at 1st, 2nd hours after high-dose therapy (4.5 [IQR, 3-5.25] and 4 [IQR, 3-5], respectively) compared to low-dose (6 [IQR, 6-7]) (p <0.05) and a lower incidence of hypokalemia in high-dose regimen (p 0.01). No difference in tremor and increment of heart rate between two groups (p 0.481, p 0.208) and no report of cardiac arrhythmia in this study.

Conclusion : high-dose continuous albuterol is associated with rapidly clinical improvement with reduction in hypokalemia and without serious clinically adverse effects compared to low-dose.

Keywords : *continuous nebulization, albuterol, status asthmaticus, asthma, children.*

การนำเสนอผลงานวิจัยทางการแพทย์ (Free Paper)
ณ ห้องประชุม บุรพรัตน์ (ห้อง 1) ชั้น 3 อาคารคุ้มเกล้าฯ

วันศุกร์ที่ 20 มีนาคม 2563 (1300 - 1530)

ประธาน : น.อ. อัครงค์ประวัตติ เขตเกียรติกุล

ประธานร่วม : ร.อ.หญิง มนัสวี อินทรพินทุวัฒน์

**Measurement of the Use of Thai Automated External Defibrillator for the
Instruction of Personnel in Educational Organization**

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Objective : The ability to use the AED trainer in Thai language version after the training is practical, effective and safe.

Material and method : This study uses a randomized controlled trial method. We separate teachers into two groups. Each group have 50 teachers from the private school all of the grade. Also, the first group use a standard AED trainer device (control group). Another group compare with the new AED trainer device (case group). Both of them which have never been trained before participating in the project, and there is a selection criterion for every generation of teachers in the school except teachers who have health problems that cannot do CPR.

Results : Evaluation of dependable by using two index which are the practical score and the confident. The score of practical in the standard AED trainer device and the new AED trainer device are at least (8/10). The new AED trainer device expressed as mean \pm standard deviation was used to describe is 0.28 (95 %CI: -0.27-0.83, P-value 0.315) and RR 1.02 (95 %CI: 0.86-1.2, P-value 0.780) and all of the teachers (100 %) have a confident to use both AED trainer.

Conclusion : The both AED trainer in Thai language version is safe, effective and confident to use. There are no differences between the new AED trainer in Thai version and certified standard AED trainer device in Thai version.

Keyword : Thai Automated External Defibrillator, Personnel in Educational Organization.

Incidence of Pediatric Healthcare-Associated Blood Stream Infections in a Tertiary Care Hospital

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Background : Healthcare-associated blood stream infections (HC-BSIs) are major concerns in the management of patients in hospitals because of increased mortality and morbidity rates and corresponding hospital costs.

Objective : To evaluate the incidence of pediatric HC-BSIs in order to assist in developing hospital policies for infection control.

Material and methods : A retrospective descriptive study was performed in Pediatric department of Bhumibol Adulyadej Hospital from January 2014 to December 2018. All patients hospitalized for more than 2 days were daily monitored for fever or any other symptoms or sign suggestive of any infection. The patients who developed the same 2 days after admission, which was not present at the time of admission, were included. They were assessed for primary blood stream infections (PBSI) and central line-associated blood stream infection (CLABSI), according to Center for Disease Control criteria.

Results : During the study period, 1,871 episodes of blood culture were taken from peripheral veins and 143 episodes from central venous catheters. There were PBSI 104 episodes (5.6 %) and CLABSI 23 episodes (16.1 %). The infection rate was high in neonate (32 %) and infant younger than 3 months of age (33 %). The incidence of PBSI and CLABSI were 1.3 per 1,000 patient-days and 3.6 per 1,000 catheter-days, respectively. The most common causative pathogens for PBSI were *Klebsiella pneumoniae* (25.9 %), *Staphylococcus coagulase negative* (19.2 %), and *Staphylococcus aureus* (9 %). The most common causes of CLABSI were *Klebsiella pneumoniae* (30.6 %), followed by *Staphylococcus coagulase negative* (21.8 %), and *Enterobacter spp.* (21.8 %). Extended spectrum beta-lactamases (ESBL) production was found 13.4 % of *Klebsiella pneumoniae*.

Conclusions : The incidence of PBSI and CLABSI were 1.3 per 1,000 patient-days and 3.6 per 1,000 catheter-days, respectively. The trend of antimicrobial resistances bacteria is increasing.

Keywords : *healthcare-associated blood stream infection, Central line-associated blood stream infection, blood stream infection, pediatric, incidence.*

อุบัติการณ์ติดเชื้อในกระแสโลหิตที่เกิดในโรงพยาบาลในผู้ป่วยเด็กโรงพยาบาลระดับตติยภูมิ

ศศพินท์ สุทธิบุญพันธ์ พบ.

กองกุมารเวชกรรม, โรงพยาบาลภูมิพลอดุลยเดช, กรมแพทย์ทหารอากาศ

บทนำ : การติดเชื้อในกระแสโลหิตในโรงพยาบาลเป็นปัญหาที่สำคัญต่อการดูแลรักษาผู้ป่วยเด็กในโรงพยาบาล ส่งผลกระทบทำให้เพิ่มภาวะแทรกซ้อนและอัตราการตายรวมถึงค่าใช้จ่ายในการรักษาพยาบาล

วัตถุประสงค์ : เพื่อศึกษาอุบัติการณ์เกิดการติดเชื้อในกระแสโลหิตในโรงพยาบาลในผู้ป่วยเด็กที่เข้ารับการรักษาในโรงพยาบาลระดับตติยภูมิและศึกษาเชื้อก่อโรคที่พบในผู้ป่วยกลุ่มนี้

วิธีการศึกษา : ศึกษาเชิงพรรณนาแบบย้อนหลังในผู้ป่วยเด็กที่เข้ารับการรักษาที่โรงพยาบาลภูมิพลอดุลยเดช กรมแพทย์ทหารอากาศ ระหว่างวันที่ 1 มกราคม พ.ศ. 2557 ถึง 31 ธันวาคม พ.ศ. 2561 โดยเก็บข้อมูลในผู้ป่วยเด็กที่เข้ารับการรักษาในโรงพยาบาลนานมากกว่า 2 วัน และได้รับการเพาะเชื้อจากเลือดขึ้นเชื้อก่อโรค โดยแพทย์ให้การวินิจฉัยว่ามีอาการและผลเพาะเชื้อเข้าได้กับการติดเชื้อในกระแสโลหิต

ผลการศึกษา : จากการศึกษพบการติดเชื้อในกระแสโลหิตแบบปฐมภูมิ 104 ครั้ง (ร้อยละ 5.6) การติดเชื้อในกระแสโลหิตที่สัมพันธ์กับการใส่สายสวนหลอดเลือด 23 ครั้ง (ร้อยละ 16.1) การติดเชื้อในกระแสโลหิตพบสูงในกลุ่มทารกแรกเกิดและเด็กเล็กอายุน้อยกว่า 3 เดือน อุบัติการณ์ติดเชื้อในกระแสโลหิตแบบปฐมภูมิโดยรวมเท่ากับ 1.3 ต่อ 1,000 วันนอนโรงพยาบาล และการติดเชื้อในกระแสโลหิตที่สัมพันธ์กับการใส่สายสวนหลอดเลือดเท่ากับ 3.6 ต่อ 1,000 วันที่ใส่สายสวน เชื้อ *Klebsiella pneumoniae* เป็นเชื้อก่อโรคที่พบมากที่สุดทั้งในการติดเชื้อในกระแสโลหิตแบบปฐมภูมิและที่สัมพันธ์กับการใส่สายสวนหลอดเลือด (ร้อยละ 25.9 และ 30.6 ตามลำดับ) เชื้อก่อโรคดื้อยาที่พบมากที่สุด คือ *Klebsiella pneumoniae* ที่ผลิต Extended spectrum beta-lactamases (ESBL) ร้อยละ 13.4

สรุปผลการศึกษา : อุบัติการณ์ติดเชื้อในกระแสโลหิตแบบปฐมภูมิเท่ากับ 1.3 ต่อ 1,000 วันนอนโรงพยาบาล และการติดเชื้อในกระแสโลหิตที่สัมพันธ์กับการใส่สายสวนหลอดเลือดเท่ากับ 3.6 ต่อ 1,000 วันที่ใส่สายสวน พบการติดเชื้อเป็นเชื้อก่อโรคดื้อยาสูงขึ้น

Efficacy of Mini Automated External Defibrillator Trainer

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Objective : To compare the efficacy of automated external defibrillator trainer normal size in comparison with mini size.

Material and methods : This research is an experimental Cross-over design Studies. Of the 154 participants enrolled to learn 2 hours basic life support course launched by emergency department staffs and residents of Bhumibol Adulyadej Hospital. They were divided into 2 groups and practiced in two situations; in a mini automated external defibrillator trainer. Rest for 10 minutes and switch group to perform in normal size. Overall data was analyzed by SPSS statistics.

Results : 154 participants (90 males and 64 females, with a mean age of 26.81 ± 10.45 years, non-healthcare provider) were performed basic life support training program with used automated external defibrillator trainer normal size and mini size. The efficacy was evaluated by adequate identify turn on emblem and shock button, used an automated external defibrillator trainer step by step and time on press turn on button to shock button less than 30 seconds. There were 133 participants (86 %) who successful effective on normal size and 134 participants (87 %) who successful effective on mini size. That was no significant differences between two groups. ($p = 0.057$)

Conclusion : Mini automated external defibrillator is compact, portable, less cost and can be perform effectively.

Keywords : *Cardiac arrest, automated external defibrillator trainer.*

Adapting CT Head Rule Age Criteria for Mild Traumatic Brain Injury in High Risk Patients at Bhumibol Adulyadej Hospital

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Background : The elderly has frequent head injuries. Computerized tomography scan is a standardized test for patients with suspected intracranial lesion. Therefore, various criteria are used in evaluating patients that should be done and age is one of the criteria in all practice guidelines.

Objective : To study increasing the age criteria of Bhumibol hospital CT head injury original criteria, does not reduce the sensitivity of the practice guidelines.

Material and methods : This are a retrospective cohort study. Patients who present with head injury and receive CT scan at the ED of Bhumibol Hospital. The results were reviewed with the radiologist before the data were collected and analyzed by sensitivity and specificity after we change age criteria to 60, 65, 70, 75, 80 and 85 for find and appropriate age criteria.

Results : 185 participants were eligible patients, 18 patients had CT abnormality. The sensitivity of the original criteria was 100 % and if we change the threshold to 65 years, the same sensitivity, and the specificity increases to 17.4 %, in contrast by the age of 70 years, the sensitivity is beginning to decrease to 94.4 %, the specificity increases to 33.5 %.

Conclusions : Changing the age criteria to age 65 is probably the safest.

Keywords : *CT scan, head injury, elderly.*

Lactate is an Independent Predictor of In-Hospital Mortality and Improves the Predictive Value of AIMS65 in Patients with Upper Gastrointestinal Hemorrhage in Emergency Department

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Objective : Upper gastrointestinal hemorrhage (UGIH) is a commonly seen multidisciplinary clinical condition in ED, which has a high mortality rate for admitted patients. High risk patients should be admitted for further management. There are various risk scoring system to evaluate risk in UGIH patients such as Glasgow-Blatchford score (GBS), GBS + serum lactate, Rockall score (RS). And the brand-new scoring is AIMS65. Whereas no risk scoring system is superior to all other in predict the in-hospital mortality. The purpose of this study is to evaluate the efficacy of "AIMS65 + lactate levels" to predict the in-hospital mortality in 30 days of UGIH patients.

Material and method : In this prospective cohort study including patients over 18 years old who came to ED of Bhumibol Adulyadej Hospital with diagnosed of UGIH between May 1st to September 30th 2019. Venous blood lactate levels were assessed. AIMS65 score were calculated. And mortality in 30 days were evaluated. Results: There were 74 patients in this study, 13 patients reported dead in 30 days. Patients who had serum lactate >2 mmol/L were more reported dead than patients who still alive (Odds ratio = 8.01; 95%CI:1.09-72.95). And patients who had AIMS65 \geq 2 points were more reported dead than patients who still alive (Odds ratio = 4.20; 95%CI:1.05-16.78). The mortality rate was significantly higher in those reporting serum lactate >2 mmol/L (Adjusted Odds ratio = 9.56; 95 %CI:1.10-83.09).

Conclusion : Serum lactate >2 mmol/L was highly sensitive to determination of in-hospital mortality rate in UGIH patients.

Keywords : UGIH, lactate levels, AIMS65, mortality rate.

Title Serum Uric Acid to HDL-Cholesterol Ratio as a Predictor of Diabetes Control in Type 2 Diabetes Mellitus

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Objective : To study the Uric acid-HDL ratio (UHR) to predict the Diabetes Mellitus 2 (Type 2 DM) Control group in Bhumibol Adulyadej Hospital.

Material and methods : This are a retrospective study. The sample was collected from 147 cases who visited the OPD and Check-up Department during June 2018 - June 2019. Descriptive analysis included frequency, mean, standard deviation, chi-square, and the 95 % confidence interval to find the relationship of UHR and DM-2 Control by using an independent samples t-test. A ROC analysis was performed to determine the sensitivity and specificity of the UHR.

Results : A total of 147 diabetic subjects were enrolled and the population group was divided into well control and poor control subgroups according to the HbA1c level (cut off 7 %). The UHR was statistically significant in both groups. When using the UHR cut-off point greater than 10 %, there was 53.73 % sensitivity and 73.75 % specificity in predicting the Diabetes control group. In the Subgroup Analysis, the UHR was statistically significant in the subject group with first diagnosis DM, no DM drug for the treatment group and receiving aspirin (ASA) drug. However, the UHR was not statistically significant in the subject group with free ASA and receiving diuretic and uricosuric drugs.

Conclusions : The Uric acid-HDL Ratio, or UHR, can predict Diabetic Mellitus control and has a high specificity but low sensitivity. The UHR can be applied in clinics or small hospitals that have no laboratory for HbA1c. In addition, the cost of the UHR is less than that of HbA1c in Thai health coverage cost estimates.

Keywords : *Diabetes Mellitus Control, Uric acid-HDL ratio, Type 2 DM.*

The Evaluation of Intra-Operative Frozen Section Diagnosis Accuracy of Ovarian Tumors; Old Fashioned Not Out of Fashion

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Background : The accuracy of intra-operative decision in confirming ovarian tumor malignancy during the operation is vital. Frozen sections are an important intra-operative tool to determine the provisional diagnosis and appropriate treatment of a tumor.

Study design : All records of diagnosed ovarian tumor patients who underwent exploratory laparotomy with intra-operative frozen sections request at Bhumibol Adulyadej Hospital (BAH) between January 2016 and June 2018 were reviewed.

Main outcome measures : Accuracy, sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) of intra-operative frozen and permanent sections were evaluated.

Results : A total of 150 cases were recruited in this study. The mean age was 45.4 years. The number of benign, borderline and malignant ovarian tumors in this study were 97, 9 and 44 cases, respectively. The overall accuracy was 93.3 %. Percentage of accuracy, sensitivity, specificity, PPV and NPV for benign, borderline and malignancy were 98.0/94.7/94.0, 100/88.9/79.6, 94.3/95.0/100, 97.0/55.3/100 and 100/99.3/92.2, respectively.

Conclusion : The frozen section results yielded accurate diagnosis for rapid intraoperative evaluation of ovarian tumors. Its high accuracy allows for an appropriate surgical plan to be made in a timely manner. Large sizes and suspected mucinous borderline ovarian tumors reduced accuracy factors of frozen sections.

Keywords : *Intra-operative frozen section- accuracy- ovarian tumor.*

**Comparison Efficacy for Termination of Early Pregnancy Failure by
Mifepristone followed by Misoprostol with Misoprostol Alone,
The First Report from Thailand: A Randomized Single-Blind Controlled Trial**

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Objective : To compare the clinical efficacy and side effects between mifepristone/misoprostol in combination and misoprostol in termination of early pregnancy failure.

Material and Method : This randomized controlled trial was performed in non-viable pregnant women (NVP) with gestational age equal to or less than 12 weeks. The control group received 800 µg misoprostol via vaginal suppository. The study group received 200 mg oral mifepristone followed 48 hours later by 800 µg misoprostol via vaginal suppository. After the first dose of misoprostol, all were evaluated every three hours and a repeated dose of 800 µg misoprostol was given two consecutive times. Manual Vacuum Aspiration (MVA) was performed for complete termination of pregnancy at 12 hours after the third dose of misoprostol if ultrasound showed incomplete termination.

Results : One hundred cases of NVP were recruited and divided equally into two groups by computer generated random number. Mean age and gestation in both groups were approximately 32 years and 8 weeks, respectively. All demographic data was comparable. The complete expulsion rates in the study and control groups were 54 % and 32 %, respectively (p-value 0.03). Fever and pain in the suprapubic area was the most common side effect. The study group reported fewer cases with fever than the control group. The study group resulted in lower dose requirements of misoprostol.

Conclusion : A combination of misoprostol and mifepristone gave a higher success rate of complete expulsion in medical pregnancy termination than the solitary use of misoprostol. A combination of misoprostol and mifepristone also had less fever.

Keywords : *pregnancy termination, mifepristone, misoprostol.*

การนำเสนอผลงานวิจัยทางการแพทย์ (Free Paper)
ณ ห้องประชุม เย็นสุดใจ (ห้อง 2) ชั้น 3 อาคารคุ้มเกล้าฯ

วันศุกร์ที่ 20 มีนาคม 2563 (1300 - 1530)

ประธาน : น.อ.ณรงค์ อินทร์พลอย

ประธานร่วม : น.ท.หญิง กาญจนา เกษกาญจน์

A Case Report in Thailand: Burkitt's Lymphoma of Maxillary Sinus

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Background : Burkitt's lymphoma is a rare but highly aggressive (fast-growing) B-cell non-Hodgkin lymphoma (NHL). This disease may affect the jaw, central nervous system, bowel, kidneys, ovaries, or other organs. Lymphomas of the paranasal sinuses and nasal cavity are uncommon. This presentation shows a rare case of Burkitt's lymphoma clinically manifestation as a generalized right cheek enlargement in an immunocompetent Thai boy which recurrent massive bleeding was occur. Thai boy 5 years old presented by mass at right maxillary sinus involve hard palate, generalized gingival involvement, disruption of teeth and contralateral lymph node enlargement. Mass was growing rapidly, which created confusion between infections or tumors. Microscopic examination of the lesion using H, E and immunohistochemical diagnosis confirmed the diagnosis as Burkitt's lymphoma. Chemotherapy regiment was started. The patient's condition improved, the mass decreased, no more bleeding. This case showed uncommonly presentation. We also discussed about early diagnosis, prompt management and prognosis of maxillary Burkitt's lymphoma.

Keywords : Burkitt's lymphoma, maxillary sinus, Thailand.

Accuracy for Rapid Diagnosis Spontaneous Bacterial Peritonitis by Ascitic Calprotectin Test in Liver Cirrhosis

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Objective : To find cut point and accuracy of diagnosis spontaneous bacterial peritonitis by ascites calprotectin from ascites

Material and method : The prospective observational study, diagnostic test evaluation, which included 55 samples in Bhumibol Adulyadej Hospital, Bangkok. All adults are cirrhotic patient performed by sanded ascites for evaluation of polymorphonuclear cell and all sample was sent for ascitic calprotectin testing. For diagnosed spontaneous bacterial peritonitis criterion is polymorphonuclear cell ≥ 250 cells/ml. The study is compared ascites polymononuclear cell as the reference with ascites calprotectin Demographic data, clinical characteristic of patients was also collected.

Results : This study collected samples from ascites evaluated of spontaneous bacterial peritonitis at April 2018 to May 2019. 55 samples that pass the criteria in this study. Patient was divided to 2 groups, spontaneous bacterial peritonitis and non SBP. In the group of spontaneous bacterial peritonitis 23 samples founded hepatitis B 3samples (13 %) hepatitis C 3samples (13 %) alcohol 17sample (73.9 %) others 2 sample (8.69 %). Regard as Child-Pugh score; Child B 9 samples (39.12 %) Child C 14 samples (60.87 %), Model for End-Stage Liver Disease median was 23.913 (11-35). From this study found the characteristic in 2 groups was not significantly difference regarding to age, sex, hepatitis B virus, hepatitis C virus, alcohol, MELD score but found significantly difference in Child B, C score. Moreover, the evaluation of ascites calprotectin found the cut off for diagnosis spontaneous bacterial peritonitis was 0.765 ng/ml sensitivity 95.7 % specificity 87.5 %.

Conclusion : ascites calprotectin is high sensitivity for diagnosis spontaneous bacterial peritonitis that it may be substitution for diagnostic by ascites polymorphonuclear cell ≥ 250 cells/ml. This study limitation was small samples only 55 sample, so the future study in large samples will be researching.

Keywords : *spontaneous bacterial peritonitis, ascites calprotectin, diagnostic test, Bhumibol Adulyadej Hospital.*

การศึกษาความเป็นไปได้ของการใช้แนวปฏิบัติการพยาบาลทางคลินิกในการประเมินและป้องกันภาวะไตบาดเจ็บเฉียบพลันในผู้ป่วยวิกฤตศัลยกรรม

ศิริรัตน์ ไทยภักดี พบ.

หออภิบาลศัลยกรรม, โรงพยาบาลภูมิพลอดุลยเดช, กรมแพทย์ทหารอากาศ

วัตถุประสงค์ : เพื่อพัฒนาแนวปฏิบัติการพยาบาลทางคลินิกในการประเมินและป้องกันภาวะไตบาดเจ็บเฉียบพลันในผู้ป่วยวิกฤตศัลยกรรม และศึกษาความเป็นไปได้ ความพึงพอใจ รวมถึงผลลัพธ์ในการใช้แนวปฏิบัติการพยาบาล

การดำเนินการวิจัย : การวิจัยเชิงพัฒนา ใช้กรอบแนวคิดในการพัฒนาแนวปฏิบัติตามหลักฐานเชิงประจักษ์ของซุคัพ ประกอบด้วย 3 ระยะคือ 1) การค้นหาปัญหาทางคลินิก 2) การสืบค้นหลักฐานเชิงประจักษ์ 3) การนำแนวปฏิบัติไปทดลองใช้ โดยมีกลุ่มตัวอย่างคือ พยาบาลวิชาชีพที่ปฏิบัติงานในหออภิบาลศัลยกรรมโรงพยาบาลภูมิพลอดุลยเดช พอ. จำนวน 35 ราย และผู้ป่วยวิกฤตศัลยกรรม ที่เข้ารับการรักษาในหออภิบาลศัลยกรรม จำนวน 220 ราย ตั้งแต่เดือน มิถุนายน-สิงหาคม พ.ศ. 2561 โดยใช้แบบสอบถามข้อมูลทั่วไป แบบสอบถามความพึงพอใจและความเป็นไปได้ในการนำแนวปฏิบัติไปใช้ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนาหาค่าความถี่ ร้อยละ ส่วนเบี่ยงเบนมาตรฐานค่าเฉลี่ย ค่ามัธยฐาน ค่าฐานนิยม และคะแนนต่ำสุด-คะแนนสูงสุด

ผลการวิจัย : แนวปฏิบัติการพยาบาลทางคลินิกในการประเมินและป้องกันภาวะไตบาดเจ็บเฉียบพลันในผู้ป่วยวิกฤตศัลยกรรม ประกอบด้วย เกณฑ์วินิจฉัยโดยใช้ KDIGO criteria การประเมินปัจจัยเสี่ยง 3 ขั้นตอน และแนวปฏิบัติในการป้องกันภาวะไตบาดเจ็บเฉียบพลันจำนวน 10 ข้อ หลังทดลองใช้พบว่ามีความเป็นไปได้ในการใช้แนวปฏิบัติโดยรวมอยู่ในระดับสูง ผู้ปฏิบัติมีความพึงพอใจอยู่ในระดับมาก หลังใช้แนวปฏิบัติ พบว่าความชุกของการเกิดภาวะไตบาดเจ็บเฉียบพลันเฉลี่ย ร้อยละ 25.45 โดยเป็นภาวะไตบาดเจ็บเฉียบพลันระยะที่ 1, 2 และ 3 เฉลี่ยร้อยละ 69.63, 8.94 และ 21.42 ตามลำดับ

ข้อเสนอแนะ : พยาบาลควรตระหนักถึงความสำคัญของภาวะไตบาดเจ็บเฉียบพลันในผู้ป่วยทุกราย แนวทางปฏิบัติฯ นี้สามารถนำไปใช้ในการประเมินปัจจัยเสี่ยงและการดูแลเพื่อป้องกันภาวะไตบาดเจ็บเฉียบพลันไปปรับใช้ในผู้ป่วยกลุ่มอื่นได้ ซึ่งจะก่อให้เกิดความมั่นใจในการดูแลผู้ป่วยอย่างเป็นระบบ มีมาตรฐาน และผู้ป่วยปลอดภัย

คำสำคัญ : ภาวะไตบาดเจ็บเฉียบพลัน/แนวปฏิบัติการพยาบาลทางคลินิก/ผู้ป่วยวิกฤตศัลยกรรม/ความชุกของการเกิดภาวะไตบาดเจ็บเฉียบพลัน/ปัจจัยเสี่ยงภาวะไตบาดเจ็บเฉียบพลัน

ปัจจัยที่สัมพันธ์กับกลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือน ในผู้ป่วยบาดเจ็บสมองระดับเล็กน้อย

กาญจนา กลิ่นคล้ายกัน พย.บ.

วิทยาลัยพยาบาลทหารอากาศ, กรมแพทย์ทหารอากาศ

วัตถุประสงค์ : เพื่อศึกษาปัจจัยที่สัมพันธ์กับกลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือนในผู้ป่วยบาดเจ็บสมองระดับเล็กน้อย ได้แก่ เพศ ระดับการศึกษา อายุความปวด การรับรู้ความเจ็บป่วย ความวิตกกังวล และแรงสนับสนุนทางสังคม

วิธีการทำวิจัย : การศึกษาความสัมพันธ์เชิงพรรณนา กลุ่มตัวอย่างได้แก่ ผู้ป่วยบาดเจ็บสมองระดับเล็กน้อย อายุ 18-59 ปี ที่เกิดกลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือนทั้งเพศชายและเพศหญิงที่มาติดตามการรักษา ณ หน่วยตรวจโรคประสาทศัลยศาสตร์โรงพยาบาลภูมิพลอดุลยเดช และโรงพยาบาลตำรวจ จำนวน 143 ราย ที่ได้มาจากการคัดเลือกตามคุณสมบัติที่กำหนด เครื่องมือที่ใช้ในการวิจัย คือ แบบสอบถาม ข้อมูลส่วนบุคคล แบบสอบถามประวัติการบาดเจ็บสมอง แบบประเมินกลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือน แบบวัดความปวดชนิดที่เป็นตัวเลข แบบวัดการรับรู้ความเจ็บป่วย แบบวัดความวิตกกังวลขณะเผชิญ และแบบสอบถามแรงสนับสนุนทางสังคมผ่านการตรวจสอบความตรงตามเนื้อหา โดยผู้ทรงคุณวุฒิ 5 ท่าน ทาค่าความเที่ยงของแบบประเมินกลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือน แบบวัดการรับรู้ความเจ็บป่วย แบบวัดความวิตกกังวลขณะเผชิญ และแบบสอบถามแรงสนับสนุนทางสังคม เท่ากับ .85, .92, .92 และ .91 ตามลำดับ การวิเคราะห์ข้อมูลโดยหาค่าความถี่ ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน สถิติทดสอบทีสถิติสหสัมพันธ์พอยท์ไบซีเรียล สถิติสัมประสิทธิ์สหสัมพันธ์ของ สเปียร์แมน และสถิติ สัมประสิทธิ์สหสัมพันธ์ของเพียร์สัน

ผลการวิจัยสรุปได้ดังนี้ คือ

1. กลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือนในผู้ป่วยบาดเจ็บสมองพบมากที่สุด คือ 9-12 อาการ ร้อยละ 36.4
2. เพศมีความสัมพันธ์กับกลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือนอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 ($p < .05$) เพศชายและเพศหญิงมีกลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือนแตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .05
3. อายุความปวด การรับรู้ความเจ็บป่วย ความวิตกกังวล มีความสัมพันธ์ทางบวกกับกลุ่มอาการ ภายหลังสมองได้รับการกระทบกระเทือนอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 ($r = .39, r = .39, r = .76, r = .73$ ตามลำดับ)
4. ระดับการศึกษา แรงสนับสนุนทางสังคม มีความสัมพันธ์ทางลบกับกลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือนอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 ($r_s = -.21, r = -.29$ ตามลำดับ)

คำสำคัญ : กลุ่มอาการภายหลังสมองได้รับการกระทบกระเทือน, ความปวด, ความวิตกกังวล, แรงสนับสนุน ทางสังคม, ผู้บาดเจ็บสมองระดับเล็กน้อย

Collaborations between the Royal Thai Air Force Nursing College and Health Care Setting for Nursing Practice Training of the Air Force Student Nurses

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Objective : The objective was to investigate the characteristic of the collaborations between the Royal Thai Air Force Nursing College and health care setting for nursing practice training of the Air Force Student Nurses.

Material and method : This research was a qualitative research design. Participants were 15 nurse instructors and administrators, Royal Thai Air Force Nursing College and 28 staff nurses and nurse administrators at health care setting. Structure interview of 7 Dimensions of collaboration designed by Travis was used for focus group and in-depth interview. Trustworthiness was done by Lincon and Guba method. Data were analyzed by content analysis.

Results : Findings revealed focus of collaborations between the Royal Thai Air Force Nursing College and health care setting policy of collaboration was like a routine work which carried out from the past until present. The structure of collaboration was the coordinators cooperated at all levels of the settings. The process of collaboration was done by determine objectives of nursing practices training. The outcome of collaborations was self-development and knowledge exchange among nurse instructors and staff nurses. Actors of collaborations were conducted by position and job assignment. Formalization was academic mutual development and followed regulations of the health care settings. Resources in the setting were reasonable used and supporting each other. Focus of power depended on ward objectives that allowed the students to practice nursing and the decision making was done by administrators. Focus of Control was under professional standard. The goal of collaboration was skill development of the nurse instructors and staff nurses and enhance mutual benefit.

Conclusion : The collaborations between the Royal Thai Air Force Nursing College and health care setting for nursing practice training of the Air Force Student Nurses could motivate the professional nursing development. The collaboration took place at all levels and the focus of control emphasized on the standard of practice.

Keywords : *Collaboration, Health care setting.*

The Effects of a Cognitive Stimulation Activity on the Cognitive Abilities and Knowledge of Dementia in Elders with Mild Cognitive Impairment

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Objective : The purpose of the quasi-experimental research was to investigate the effects of a cognitive stimulation activity on the cognitive abilities and knowledge of dementia in elders with mild cognitive impairment.

Material and method : The conceptual framework for this study is based on Spector's concept (Spector, 2003). The sample comprised 33 elders with Mild Cognitive Impairment who were selected in line with this study's inclusion criterion. Member of the school for the elderly at Saimai district Bangkok, one group pretest and posttest design. The sample continuously attended the cognitive stimulation activity were Physical activity, Cognitive activity and Social activity, each session lasted 90 minutes, once a week for six weeks. The instruments used in the experiment included the "Cognitive Stimulation Activity" for older persons with mild cognitive impairment. The data were collected by using Thai Mental State Examination and knowledge of dementia test. The reliability of the research instruments was 0.86 and 0.84 respectively. Data were analyzed by using descriptive statistics and t-test.

Results : Major findings were as follows:

1) 75.76 % of elderly is between 60-69 years, 78.79 % were women, 48.48 % graduated in primary education, 39.39 % unemployed, 30.30 % did not have income, 83.33 % of the elderly had underlying diseases and 42.43 % of those underlying diseases was hypertension.

2) The average score of cognitive abilities in the sample group after attending the cognitive stimulation activity (M=29, S.D.=1.39) were statistically significantly higher than before participating in cognitive stimulation the activity (M=27.21, S.D.=1.41), (t=6.44, p <.05).

3) The average score of knowledge of dementia in the sample group after attending the cognitive stimulation activity were not significantly different (p>.05).

Conclusion : It can be concluded that the cognitive stimulation activity effectively increased the cognitive Abilities of the Elderly with mild cognitive impairment. In addition, this program is a therapeutic intervention that can develop and enhance the cognitive function of Elderly with Mild Cognitive Impairment.

Keywords : *mild cognitive impairment, cognitive Abilities, cognitive stimulation activity.*

The Effects of The Readiness of Nursing Practice in Adult Nursing Practicum 1 on Knowledge and Confident in Nursing Practice among Air Force Student Nurses, Academic year 2018

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Objective : To examine the effects of the readiness of nursing practice in Adult nursing practicum 1 on knowledge and confident in nursing practice among Air Force Student Nurses, Academic year 2018.

Material and methods : This research was quasi-experiment research design by using one group pre-test and post-test design. Pre-test related to knowledge and confident in nursing practice was done and post-test after participated in the readiness of nursing practice in Adult nursing practicum 1. Samples were 55 Air Force Student Nurses. The research instruments consisted of the knowledge testing and confident in nursing practice questionnaires. Reliability of Knowledge testing was calculated by KR-20 was 0.57 and reliability of confident in nursing practice questionnaires was calculated by Cronbach's alpha coefficients was 0.94. Data were analyzed by descriptive statistic and paired t-test.

Results : The results revealed that the average score of knowledge and confident in nursing practice of Air Force Student Nurses after participated in the readiness of nursing practice in Adult nursing practicum 1 were statistically significantly higher than those before participation ($t = 15.69, p < 0.05$ and $t = 9.98, p < 0.05$, respectively).

Conclusion : This study suggested that the readiness of nursing practice in Adult nursing practicum help nursing students improve the knowledge and be confident in nursing practice.

Keywords : *Readiness of nursing practice, Adult nursing practicum, Knowledge, Confident in nursing practice.*

Factors Related to Prevention Behavior for Communicable Disease in The Air Technical Students

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Objective : This descriptive research aims to study the prevention behavior for communicable disease and relating factors including knowledge, perceived susceptibility, perceived benefits, perceived barriers and perceived self-efficacy.

Material and Methods : Cluster random participants were 164 air technical students. Data were collected by questionnaires. Statistical analysis used descriptive statistics, Pearson's product moment correlations coefficient and stepwise multiple regression.

Results : The results revealed that knowledge, perceived susceptibility, perceived benefits and perceived self-efficacy were in good level but the perceived barriers were in moderate. Knowledge, perceived susceptibility, perceived benefits and perceived self-efficacy had significant positive relationship with prevention behavior for communicable disease. ($r = .196, .314, .400$ and $.349, p < .01$) but perceived barriers had significant negative relationship with prevention behavior for communicable disease. ($r = -.286, p < .01$). Furthermore, perceived benefits, perceived barriers and perceived self-efficacy were able to predict prevention behavior for communicable disease 30.4 % ($R^2 = 0.304, p < .001$)

Keywords : *Prevention Behavior, Communicable Disease, the Air Technical Students.*