

Health Promoting Behaviors of Medical Personnel at the

Directorate of Medical Service, Royal Thai Air Force

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Objective: The study was a survey research design aimed to study the level of 6 health promoting behaviors as well as compare such behaviors across the health data among the medical personnel at the Directorate of Medical Service, Royal Thai Air Force.

Material and methods: The sample was 171 who attended at the annual Health promoting day on November 24th, 2017. Pender's Health promotion questionnaire was used in this study. The data were analyzed by using descriptive statistics, t test Independent, Chi-square test and One-way ANOVA.

Results: revealed that the average mean scores (standard deviation; S.D.) of all 6 health behaviors was 3.17(0.25). The scores were still low in nutrition and exercise behavior areas, the mean score (S.D.) were 2.87(0.49) and 2.82(0.35) respectively. The statistically significance differences were found among "exercise score group versus %body fat group" and "nutrition score group versus %body fat group" ($p < 0.05$). Moreover, the results showed positive linear correlation between body mass index (BMI) and blood pressure levels, both systolic and diastolic blood pressure.

Conclusion: All health promoting behaviors should be concerned and kept in mindful thoughts of everyone. The health status should be assessed and followed up consistently. The "Self-help and Self care" are the most important strategies to make the Directorate of Medical Service to be the healthy organization.

Keywords: health promoting behaviors, Directorate of Medical Service

Acknowledgement: Many thanks for all "Health promoting team" of Division of Preventive Medicine and "All participants".

Satisfaction Monitoring and Real Time Management by Using QR Code-Mobile Survey on the Physical Examination Dates of RTAF Officer Recruitment

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Background:According to the policy of Thailand 4.0, there have been promoted the information technology systems (IT) integrated with daily working in everywhere. At the Division of Preventive Medicine, Directorate of Medical Service, there are many RTAF officers who come to receive annual medical checkups and medical services every day.

Objective:This pilot project was aimed to improve our service process system by using IT.

Material and methods:The project was conducted on November 6-8th 2017, the physical examination dates of RTAF officer recruitment. This focus was on the teamwork of all our staffs under the concept "Plan Do Check Act". We prepared all 12 stations for services. After passing all stations, each officer was asked to scan the QR code to answer the questionnaire to assess the satisfaction of all services. Along the time of examination dates, we prepared a public relation and an IT officer who monitored the comment results on the computers at the front.

Result:Number of feedback sent to the service section if they found any problem.

Conclusion, using this QR code survey is the rapid and safe method for our team to know all comments, to monitor on real time, thus, we can manage to improve our services as soon as possible.

Keyword: satisfaction monitoring, real time management, QR code

Acknowledgement: Many thanks for all personnel of Division of Preventive Medicine, Directorate of Medical service, RTAF and all Participants

Incidence of EDAC Score <16 with Electrocardiogram No Ischemic Pattern and High Sensitivity Troponin T at 0 and 1 Hour Result Negative

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Background: Acute chest pain is the one of common chief complaint in emergency department(ED). The cause of chest pain is outside the variety. Acute coronary syndrome is the fatal disease. The diagnosis should not be wrong, even if the symptom is not clear.

Incidence of EDAC score <16 with electrocardiogram no ischemic pattern and high sensitivity Troponin T at 0 and 1 hour result negative

Objectives:

- 1.To compare EDAC score(EDACS) less than 16 in patients with acute chest pain, either electrocardiogram was not shown ischemic pattern nor cardiac troponin were negative in 0 and 1 hour.
- 2.To study the incidence of cardiovascular complications in the patients with EDAC score less than 16, electrocardiogram was not shown ischemic pattern nor cardiac troponin were negative in 0 and 1 hour at next 30 days after discharge from emergency department
3. To study sensitivity, specificity, positive predictive value, negative predictive value and accuracy of EDAC score

Material and method: This pprospective descriptive study including patients came to ED of Bhumibol Adulyadej hospital with acute chest pain as the presenting symptom, during 1 August 2017 to 30 October 2017

Results: 165patients were included; average aged 54 ± 21 years, 52% female, 48% male. Incidence of EDAC score less than 16 in patients with acute chest pain, either electrocardiogram was not shown ischemic pattern nor cardiac troponin were negative in 0 and 1 hour is 63.63%. Incidence of cardiovascular complications in the patients with EDAC score less than 16, electrocardiogram was not shown ischemic pattern nor cardiac troponin were negative in 0 and 1 hour at next 30 daysafter discharge is 0%, The EDACS have sensitivity 72.7%, specificity 72.7%, positive predictive value 29.1%, negative predictive value 94.5% and accuracy 72.7%

Conclusion: EDACS < 16is safety fordischarge patient who had chest pain correlate with result from cardiac enzymecan reduce the waiting time and crowding in the emergency room.

Keywords: incidence, EDAC Score <16, electrocardiogram,ischemic pattern, high sensitivity Troponin T

Clinical use of the New Paradigm of WHO Dengue Classification in

BhumibolAdulyadej Hospital

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Background: Dengue infection is a major public health problem in South East Asia, including Thailand. Accurate diagnosis and appropriate management are essential steps to decrease mortality rate. In 2009, World Health Organization (WHO) presented the Dengue New Classification by adjusting the diagnostic criteria for dengue infection to be easy to implement.

Objective: To evaluate the clinical use of WHO Dengue Classification 2009 for dengue virus infection at BhumibolAdulyadej Hospital.

Material and methods: A Retrospective descriptive study was performed at the Pediatrics Department of BhumibolAdulyadej Hospital. Medical records of eligible patients who were aged under or 15 years old and diagnosed with dengue infection between July 1, 2016 and October 31, 2017 were reviewed.

Results: Two hundred and nine patients with dengue virus infection were diagnosed. 168 cases (80.4%) were done according to the conventional classification, 29 cases (13.9%) the new classification, and 12 cases (5.7%) both classifications for the diagnosis. In conventional classification group, 127 cases (75.6%) followed the treatment guideline. In new classification group, all patients followed the treatment guideline. All dengue patients were discharged with no complication.

Conclusions: The new paradigm WHO Dengue Classification 2009 is not yet world-wide for clinical use in dengue diagnosis and management at the Pediatrics Department of BhumibolAdulyadej Hospital.

Keywords: Dengue, Warning signs, Admission, Classification, Clinical use

Fluorescein Experience for High Grade Glioma Resection in Bhumibol Adulyadej hospital

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Background: Glioblastoma is 15% of primary brain tumor. GBM is 80% of malignant brain tumor. An approximately deaths are 13000/ year and average life expectancy 14 months. Extended GBM resection determines of outcome, with longer life expectancy and improve intraoperative visualization and detection of residual tumor. Invasive behavior of high grade glioma made complete tumor resection, difficult to achieve. Heterogeneity and similarity of tumor with surrounding brain parenchyma when visualized under a surgical microscopesodium fluorescein use with Intravenous low dose fluorescein provides an available method for fluorescein guided tumor resection can improve resection of gliomas with minimal risks

Objective: To review cases with craniotomy operation with intra operative sodium fluorescein injection.

Material and methods: We performed craniotomy with intra operative sodium fluorescein since May 2016. Total cases from May 2016-May 2017 were 23 cases, male 16 and female 7.

Results: There were brain metastasis 12 cases, GBM 8 cases which were anaplastic astrocytoma 3 cases. The median age was 45-years-old and with 1-12 months follow up.

Conclusion: Sodium fluorescein use with advanced microscope integrated for surgical resection can improve surgical outcome and prolonged survival rate for high grade glioma patients.

Keywords: fluorescein experience, high grade glioma, resection

QTc Interval Prolongation in DM Type 2 Patient during Severe Hypoglycemia and Baseline

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Background: Type 2 DM patient has increased risk of severe hypoglycemia. Severe hypoglycemia is associated with cardiac arrhythmia and sudden cardiac arrest as evidenced by corrected QT interval prolongation and increase mortality in T2DM.

Objective: Evaluated an association between prolonged QTc interval and severe hypoglycemia episode and evaluated the change in the QTc interval from baseline.

Material and Method: Between January 2017 and November 2017, 213 patients with T2DM, who visited the emergency department, Bhumibol Adulyadej hospital due to severe hypoglycemia by retrospective cohort study. The QTc interval was analyzed during SH and baseline before SH. QTc measurement ≥ 450 ms. in men and ≥ 460 ms. in women were abnormally prolonged QTc.

Results: The mean age was 68.2 ± 13.9 years and the mean diabetes duration was 14.6 ± 5.3 years. The mean QTc interval during SH and baseline were 437.3 ± 22.5 ms. (441.5 ± 24.5 ms. in men and 435 ± 21.1 ms in women) and 425.3 ± 18.9 ms. (425.2 ± 18.9 in men and 425.4 ± 19 ms in women). There was significant increase QTc interval when episode of SH, p -value < 0.001 . There were 31 patients (14.6%) had a prolonged QTc interval during SH (20.5% men and 11.4 women). The mean prolonged QTc interval during SH was 475.32 ± 19.5 ms (Min 450, Max 521 ms.), 478.87 ± 14.4 ms. in men and 472.2 ± 23.2 ms. in women. The prolonged QTc interval at baseline was associated with prolonged QTc interval during SH (OR = 47.0, 95% CI 9.91-223.2, p -value < 0.001) after adjusting for multiple confounders.

Conclusion: Severe hypoglycemia was associated with prolonged QTc interval in T2DM. The QTc interval during SH was increase from the baseline. The prolonged QTc interval at baseline was associated with prolonged QTc interval during SH

Keywords: Severe hypoglycemia, type 2 Diabetes mellitus, QTc interval, prolonged QTc interval

Factors Affecting Moderate to Severe Injuries of Bicycle Accidents Presenting to Bhumibol Adulyadej Hospital

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Background: Cycling has recently become more popular hence an increase in bicycle accidents where injuries range from mild to severe. We therefore conducted this research to identify factors affecting moderate to severe injuries of bicycle accidents to plan for injury prevention.

Objective: 1. to investigate factors affecting moderate to severe injuries in bicycle accidents presenting to Bhumibol Adulyadej Hospital

2. To study the baseline characteristics of bicycle accident victims including gender, age, mechanism of injury, the part of the body injured and number of the part of the body injured.

Material and methods: A chart review of bicycle accidents presenting to Bhumibol Adulyadej Hospital between January 1, 2016 to August 31, 2017 was conducted. Injury severity of individual was graded by Injury Severity Score (ISS). Then divided into 2 groups: mild injury group (ISS 1-3) and moderate to severe injury group (ISS 4-75). Factors affecting moderate to severe injury were analyzed by using the Chi-square, OR (Odd ratio) and 95% CI for the OR.

Results: There were 317 accident victims. The number of moderate to severe injuries was 128 (40.4%) patients whereas 189 (59.6%) had mild injuries. Both groups were mostly male, age group of 41-64 years, most injury mechanism was falls, had one part of the body injured, most time of injury was daytime and most common injury was to the upper extremities, second common was lower extremities. Different factors between two groups were the mean age and management. The mean age of the moderate to severe injuries group was 41.25 ± 25.84 years old, the mild injury group was 34.93 ± 23.78 years old. Management of moderate to severe injury was observation or hospitalization whereas mild injury was treatment as OPD cases. Factors affecting moderate to severe injuries were age group 65 years and over (OR 2.34, 95% CI 1.16-4.71, p value 0.017), neck injury (OR: 1.5, 95% CI 1.03-2.18, p-value=0.031) and upper extremities injury (OR 9.5, 95% CI 1.06-85.06, p-value=0.017).

Conclusions: Elderly injured have risk of developing serious complications and conditions may be more serious than they appear. Maintain a high index of suspicion for serious injury to the elderly even in low energy impact injuries. Neck trauma, if suspected, immediate restriction of spinal motion is advised. Extremity injuries such as fractures or dislocations are resulting in some immediate disability, maybe reduced by the use of protective equipment.

Keywords: factors affecting, moderate to severe Injuries, bicycle accidents

Factors Associated with Dengue Shock Syndrome

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Background: Dengue shock syndrome (DSS) is a significant global health problem. Mortality rate of Dengue infection in Thailand was 0.13%. Early detection of patients at risk to develop DSS is an important step to decrease mortality rate. The primary care centers do not have special laboratory test to predict DSS. Some clinical clues could help identifying such patients at risk.

Objective: To identify any factors associated with the development of shock.

Material and methods: The Cross-sectional descriptive study was done among pediatric patients. Medical records of eligible patients who were aged under or 15 years old with diagnosed dengue virus infection between January 1, 2012 and December 31, 2016 and confirmed by at least one positive test for dengue non-structural protein 1 (NS1) antigen test and/or positive Immunoglobulin M for dengue virus were reviewed and analyzed. The protocol was approved by the ethics review committee of Bhumibol Adulyadej Hospital.

Results: Of the 305 laboratory-confirmed dengue patients, 292 (95.7%) were in the dengue non-shock group and 13 (4.3%) were in the DSS group. The presence of petechiae, dizziness or irritable, hepatomegaly, and signs of plasma leakage (ascites and pleural effusion) would significant increase risk of DSS. Using binary logistic regression, presenting of dizziness (OR 60.4, 95%CI 5.2-708.6), and irritable (OR 13.8, 95%CI 1.0-190.9), signs of plasma leakage (OR 38.9, 95%CI 6.1-250.2), and platelet count below 50,000/mm³ (OR 18.5, 95%CI 1.9-177.4) were found out to be significant risk factors of shock in pediatric patients of DHF.

Conclusion: Factors associated with high risk of developing DSS were dizziness, irritable, signs of plasma leakage (pleural effusion and ascites), and thrombocytopenia.

Keywords: Dengue fever, Dengue hemorrhagic fever, dengue shock syndrome, factor associated

Quality of Life of Air Force Retirees and Families with Chronic illness Received Palliative care

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Objectives: This research aimed to study quality of life level, physical and psychological problems of Air Force Retirees and families with chronic illness and received palliative care.

Material and Methods: Population was 153 Air Force Retirees and families with chronic illness. Convenient sampling was used to recruit 110 participants. Research instrument was WHOQOL-BREF-THAI questionnaires; Cronbach's alpha coefficient was 0.89. Descriptive statistic was used for data analysis.

Results: The results revealed that the quality of life of Air Force Retirees and Family with Chronic illness and received palliative care was at medium level 80 %, (n=88). Quality of life of health factors was at medium level 90.91% (n=100), mental health factors was at medium level 76.36 % (n=84), social relation factors was at medium level 50.91% (n=56), environment factors 60.91% (n= 67) The most common found related to physical problem was pain. Psychological problems mostly found in bed ridden patients were feeling downhearted and depression.

Conclusion: The results of this study could be used as a guideline to promote a better quality of life of Air Force Retirees and families with chronic illness and received palliative care.

Keywords: Quality of life, Air Force Retirees, Chronic illness, Palliative care

**Comparison of Basic Life Support Knowledge between
Video Tutorial and Traditional Instruction for Nurses at
Bhumibol Adulyadej Hospital, Directorate of Medical Services, RTAF**

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Objective: To compare the knowledge of basic life support (BLS) between Video tutorial and traditional instruction for nurses of Bhumibol Adulyadej Hospital, Directorate of Medical Services, RTAF.

Material and methods: Nurses at Bhumibol Adulyadej Hospital were categorized into 2 groups by simple randomization method, Video tutorial and traditional instruction were implemented in group 1 (experimental group) and group 2 (control group), respectively. Pre and posttest of MEQ examination and skill checklist by instructor were assessed between the two groups.

Results: There were 195 and 192 nurses in experimental and control groups, respectively. The mean age was 32.4, while most of the age group was 20-25 years old. Most of them have less than 5 years of experience in nursing care. There was no statistically significant difference between the increasing score of MEQ examination and skill checklist score between the two groups. (p value = 0.49 and 0.967.)

Conclusion: There were no statistically significant difference of BLS knowledge and skill between using Video tutorial and traditional instruction.

Keywords: basic life support, knowledge, video tutorial, traditional instruction, nurses