

OT1-07

Demonstrating A Survival Swimming Program in Natural Water Bodies to Prevent Drowning

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Child drowning in Thailand is a leading cause of mortality and is now a major public health priority. Providing children with survival swimming lessons is an effective way of decreasing the risk of drowning. However, conventional swimming lessons have been limited to standard swimming pools which are a limited resource in developing countries like Thailand. Operational research was conducted in the Chaing Rai Province during 2008 which aimed to develop a feasible survival swimming program to be effective in natural bodies of water and increase the survival swimming ability of 60 primary school children (aged 6-12). A cooperative of people from the local administration, health center staff, parents, school teachers, and the research team was formed and initiated the survival swimming program as a community effort. A clean natural water body in the community was chosen as a safe area to swim. Local materials such as bamboo, empty gallon plastic bottles and dry coconuts were utilized during program. The swimming lessons were provided by a trained survival swimming instructor and 60 children from the local school were enrolled and divided into five groups of 12. At the conclusion of 20 swimming lessons, over 80% (83.3%) of the children gained a level of swimming ability which required the physical skills necessary to enter and across at least 20 meters of open water without assistance and floated for 90 seconds. This research demonstrated that with limited resources a survival swimming program in a natural water body is an effective and feasible way to increase swimming abilities of primary school aged children.

OT1-08

Accident Emergency Response of Public Buses at the Daya Automobile Terminal in Makassar- Indonesia

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Bus accidents frequently occurred with fatal injuries and high number of victim. Indonesian government has regulated the accident emergency response that is attitude and action which should be implemented quickly in holding an accident event of motor vehicle. The regulation arranges the safety minimum standard which can give maximum safety protection to bus passengers and crews. This is intended in order the bus crews and passengers can get maximum protection by confirming that the buses have minimum safety requirement which is always in good working condition and the crews of buses know to operate them. Bus is one of land

transportation which is often to get an accident. The most important factor which may minimize the number and fatality of accident are the driver behaviors and emergency response facilities of buses. This study is aimed to identify the accident emergency response of buses in the Daya Regional Terminal, Makassar city, Indonesia. Total 147 of 478 buses and their drivers involved in this study selected by using an accidental sampling method. Results of the study indicated that 42 buses (28.6%) have fully facilitated with emergency tools. Total 129 drivers (87,8%) having high knowledge score, 108 drivers (73,5%) having good attitude score, 15 (10.2 %) drivers having good proactive action score and 6 drivers with good reactive action score. The study suggests to educate the bus company managers and drivers on bus safety regulation followed law enforcement in order they complete and maintain their buses in good and full safety facility.

Oral Track 2- Clinical Research & Public Health

OT2-01

Gender Differences in the Relationship between Depression and Cardiac Autonomic Function among Community Elderly

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Objective: The mechanism underlying the differential effect of depression on morbidity and mortality in men and women remains unknown. This survey was designed to examine gender effects on the relationship between depressive symptoms and cardiac autonomic function among community dwelling elderly.

Methods: Six hundred and six randomly selected community-dwelling elderly men and women ≥ 65 years of age were enrolled. Depressive symptoms were assessed with the Hospital Anxiety and Depression Scale. Cardiac autonomic function was evaluated by measuring heart rate variability parameters. Frequency-domain indices of heart rate variability were obtained.

Results: Among the subjects, 58.4% were male with a mean age of 77.9 years. Stratified analyses by gender revealed a dose-response association between depressive symptoms and lower cardiac vagal control among elderly males ($p=0.003$). Male subjects with mild depressive symptoms (depression scores: 5-6) showed prominent cardiac sympathetic predominance compared with the reference group (depression scores: <5) ($p=0.005$). In contrast, these findings did not exist among elderly females.

Conclusions: The association of depressive symptoms with poor cardiac vagal control and sympathetic predominance was more robust among elderly males than females. This finding may help explain gender differences in the association of depression with morbidity and mortality.

OT2-02

Influence of Physician's Specialty on the Risk of Diabetic Ketoacidosis Admission in Diabetes

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Background: Diabetic ketoacidosis (DKA) is a life-threatening complication of diabetes mellitus, and the risk of DKA can be reduced by providing adequate and good-quality care. The aim of this study was to assess the risk of DKA admission in relation to physician's specialty.

Methods: In this retrospective cohort study, we used the 1997 National Health Insurance (NHI) ambulatory care datasets to identify 500,867 diabetes patients. Based on the ambulatory care visits of 1997, all study subjects were categorized into four groups, i.e., those routinely cared by endocrinologists, by endocrinologists or internal medicine physicians, by endocrinologists/ internal medicine physicians and other specialties, and by non-endocrinologists/ internal medicine physicians. The study cohort was then linked to the 1997-2006 inpatient claim data for possible hospitalizations due to DKA (ICD-9-CM: 250.1). We employed logistic regression models to estimate the adjusted odds ratio (AOR) of DKA admission episode and frequency in relation to physician's specialty after controlling for characteristics of diabetic patients and medical institutions.

Results: Compared to patients routinely cared by endocrinologists, those not regularly cared by endocrinologists were all associated with a significantly increased AOR (1.51 to 2.12) of DKA admission episode. The AORs of higher frequency DKA admission (≥ 0.133 times/person-years) among the patients not regularly cared by endocrinologists were also significantly elevated in a range of 4.45 to 6.93.

Conclusions : Physician's specialty may pose significant influences on the risk of DKA admission in the diabetes population of Taiwan. Promoting the quality of diabetes care delivered by non-endocrinologists should be seriously considered.

OT2-03

Cigarette Smoke Affected the Association between Type 2 Diabetes Mellitus and the Risk of Dementia

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Background: The interaction between type 2 diabetes mellitus (DM) and smoking on the risk of dementia has not been reported previously.

Methods: A total of 169 Alzheimer's disease (AD) patients, 97 vascular disease (VaD) patients and 215 controls were recruited from Departments of Neurology

and Health Checkup service at National Taiwan University Hospital and Cardinal Tien's Hospital from 2007 to 2009. DM and smoking status were collected from questionnaires and medical records.

Results: Cigarette smoke was significantly associated with an increased risk of AD [adjusted odds ratio (AOR)=3.56, 95% confidence interval (CI)=1.65-7.68] and VaD (AOR=2.60, 95% CI=1.11 to 6.11) after adjusting for age, sex, BMI, and religion. Type 2 DM was associated with an increased risk of VaD (AOR = 4.56, 95% CI=2.28 to 9.14), but the result was not significant for AD. A significant interaction was observed between cigarette smoke and type 2 DM on the risk of AD (p for interaction=0.006) but not for VaD (p for interaction=0.69). Smokers (current and former) without type 2 DM showed a significant increased risk of AD (AOR= 5.21, 95% CI= 2.30 to 11.79) as compared with non-smokers without type 2 DM. Smokers and non-smokers with type 2 DM showed a 9.96- and 3.95-fold risk of VaD (95% CI=2.37-41.85 and 1.80-8.67, respectively).

Conclusion: A significant interaction was observed between cigarette smoke and type 2 DM on the risk of AD but not VaD.

OT2-04

Tobacco Smoking and Serum Bilirubin Subtypes in Healthy Korean Men

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Objective: Serum bilirubin is a potent antioxidant and has been found to be inversely related to cardiovascular diseases. Smoking is a modifiable risk factor for cardiovascular diseases. However, there are only a few studies on tobacco smoking in relation to serum bilirubin. In addition, most of these studies were limited to total bilirubin. Therefore, we explored the association between bilirubin subtypes and tobacco smoking among healthy Korean men.

Methods: This study included 48,040 men aged 30-87 years who visited the Korea Medical Institute (KMI) for routine health evaluation from January, 2007 to December, 2007. The associations of smoking status with serum direct, indirect and total bilirubin were assessed by logistic regression analyses taking consideration differences in subjects with different smoking characteristics.

Results: Current smokers had lower serum bilirubin concentrations than nonsmokers and ex-smokers. Smoking amount, smoking duration and pack-years were inversely and significantly related to direct, indirect and total bilirubin. In a multivariable adjusted model, odds ratios (95% confidence interval) to belong the lowest bilirubin quartile in the highest smoking duration group compared with nonsmokers were 1.9 (1.8-2.0) for total bilirubin, 1.8 (1.7-1.9) for direct bilirubin and 1.8 (1.7-2.0) for indirect bilirubin, respectively. These

relationships between total bilirubin and smoking amount were similar independent of different groups of age, body mass index, hypertension, diabetes, serum lipid and alcohol intake.

Conclusion: These results support that all three subtypes of serum bilirubin were inversely related with smoking amount and duration in Korean men. Further studies are needed to confirm the association of bilirubin with smoking.

OT2-05

Effectiveness and Safety of High Power Photoselective Vaporization for Benign Prostatic Hyperplasia

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Background. Photoselective vaporization of the prostate (PVP) has been evolved as an alternative treatment for benign prostatic hyperplasia. Our objectives are to evaluate the effectiveness and safety of the new high power PVP procedure. Methods and Findings. one hundred and fifteen men with symptomatic benign prostatic hyperplasia were retrospectively follow up. The basic demographic parameters including height, weight, education level and annual income were significantly different between the 2 groups. Compared to TURP, the PVP group had better outcomes in IPSS improvements (13.6 versus 11.7, $P=0.046$), quality of life score change (2.91 versus 2.5, $P=0.034$). After averaged 11 months of follow up duration, the TURP group showed higher urethral stricture rates (3.3% versus 14.5%, $P=0.033$). In multivariate analysis results, after adjust age, body mass index, prostatic specific antigen density, education level, annual income and preoperative value of IPSS, the procedure difference was a prediction factor for IPSS improvements (estimate coefficient=2.70, 95 confidence interval=0.71 – 4.69). The subgroup analysis showed younger patients had better improvement in IPSS after PVP. Conclusions. This study indicates that PVP offers effectiveness for BPH and advantageous over TURP with regard to operative safety. The long term follow up is needed to evaluate the durability and possible morbidity.

OT2-06

Association of Serum Urate with Risk Factors of Metabolic Syndrome

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Metabolic syndrome has been found to increase substantially with increasing levels of serum urate. Prevalence of metabolic syndrome was more than two-fold greater in patients with gout than in individuals

without gout. The objective of our study was to establish the association of serum urate with risk factors of metabolic syndrome. There were 1272 respondents in our study with 78.5% Malays, 46.5% males and the mean age was 48.18 ± 5.19 years. The overall prevalence of hyperuricemia was 16.8%, with higher prevalence in males compared to females (22% vs. 12.2%). For men and women, serum urate was statistically correlated ($p < 0.05$) with increasing waist circumference ($r=0.134$ and $r=0.278$), systolic ($r=0.176$ and $r=0.207$) and diastolic blood pressure ($r=0.146$ and $r=0.205$) as well as triglyceride ($r=0.183$ and $r=0.208$); and negatively correlated with high density lipoprotein cholesterol ($r= - 0.100$ and $r= - 0.182$). Serum urate level gradually increased with increasing number of metabolic risk factors. The odds ratios for metabolic syndrome in the presence of hyperuricemia in men were 1.66 (95% C.I.:1.12-2.45) and 2.46 (95% C.I.: 1.54-3.93) in women. In the multivariate logistic regression model, among men: those with hypertension (OR: 1.95; 1.24-3.05) and hypertriglyceridemia (OR: 1.91; 1.24-2.93) had higher odds of getting hyperuricemia. Among women: those with hypertension (OR: 2.04; 1.24-3.34) and central obesity (OR: 1.81 ;1.00-3.28) were more likely to have hyperuricemia. This study demonstrated a linear relationship between serum urate level and increasing number of metabolic risk factors and established a positive relationship between hyperuricemia and hypertension (male and female), hypertriglyceridemia (male) and central obesity (female); after adjusting for confounding factors.

OT2-07

Algorithm of Malaria Diagnosis as A Result of Comparison between Clinical Symptom and Microscopic Test at the Mepane Public Health Center in Poso Regency, Indonesia

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Up to now malaria is a health problem for the people in Indonesia in which malaria is endemic in almost every region. Malaria can cause illness and death and has socioeconomic impact on poor people in the endemic area. The aim of the study was to make algorithm of malaria diagnosis as a result of the comparison between clinical symptom and microscopic test. The study was a cross sectional design. The study was conducted from July to November 2007. Subjects in the study ($n= 136$) were examined clinically and microscopically for malaria. The data was analyzed by using chi square. The results of the study indicated that there was a correlation between clinical symptom of malaria and microscopic test. The symptoms related to microscopic test were fever ($p = 0.00$), shiver ($p= 0.00$), headache ($p= 0.00$) and painful joint ($p= 0.00$). A multivariate analysis using logistic regression indicated that headache, shiver, fever, and painful joint are algorithms of malaria with sensitivity (91.0%) and specificity (83.3%). We conclude

that algorithm of malaria could be used as an alternative way in early diagnosis for malaria in endemic area with limited facilities of microscopic laboratory examination.

OT2-08

Metabolic Syndrome Progression in Young Japanese Workers in A Selected Company

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Risk factors for metabolic syndrome are a common finding in routine health checkup in Japanese workplace. This study assesses relationship between risk factors and the progression of the metabolic syndrome in young and young adult Japanese workers.

A number of 5,640 Japanese workers of age 25, 30, and 35 years old were longitudinally studied for 5 years in one company. The metabolic syndrome parameters are as follows: Obesity: BMI>25; Hypertension: systolic Bp 130mmHg or diastolic Bp 85; Dyslipidemia: Cholesterol 220mg/dl or HDL-cholesterol<40 or Triglyceride 150; Hyperglycemia: Fasting blood sugar 100mg/dl. A subject was considered to have liver dysfunction if AST 31 or ALT 31 GTP 51.

Alcohol intake history was taken to see possible association. Chi-square (χ^2), Poisson and logistics regression were applied for statistical decision.

Over 5 years, 6.3% new workers significantly developed metabolic syndrome risk with male preponderance.

Relative risk is significant for all factors. Subjects with liver dysfunction at baseline exhibited metabolic syndrome components more than those without at baseline over 5 years. In 25-year group, subjects without any metabolic syndrome component at baseline developed more obesity and hypertension after 5 years. The 30- and 35-year group developed dyslipidemia in similar course of time. Logistic regression explored BMI and liver dysfunction to be independent for metabolic syndrome in 5 years, irrespective of age or alcohol intake.

Liver dysfunction and BMI are independently associated with metabolic syndrome in Japanese young workers.

groups of population as the foundation for research, the incipient plan for the Taiwan Biobank has been assailed by challenges and suspicions from human rights organizations. The crucial controversy lies in whether the public can comprehend the content of this significant national science plan, and whether or not the public supports the establishment of the Taiwan Biobank. The investigation reported here utilized telephone interviewing in the period November 22 through 29, 2007, and completed interviews with 2,499 persons; this achieves representation of the population with a level of confidence level of 95%, with a sampling error of no more than $\pm 1.96\%$. This research discovered that 82.2% of respondents agreed with the view that "a person's health is related to genetic heritage." 82.8% of respondents agreed with the "need to research the influence of life environment and a person's genetics on health." 76.6% of respondents agreed with the need for "long-term collection of material on public health, life, and genetics, in order to understand the causes of disease." 78.2% of respondents agreed with the need for a "Taiwan biological materials repository for long-term collection of material on public health, life, and genetics, in order to improve national health"; and only 9.9% felt this is unnecessary. The research team believes that the opposition of 10% of the public cannot be allowed to block the support of 80% of the public for establishment of the Taiwan Biobank. What is important is to find a way to carry out this policy in a way that can be accepted by the public, and that is the imperative that should be the responsibility of the government.

OT3-02

Prostate Specific Antigen as A Prognostic Factor for Biochemical Progression of Advanced Prostate Cancer Patients Receiving Hormone Treatment ***Chien-Hua Chen¹, Kuo-Liong Chien²***

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Background: The aim of this study is to identify prognostic factors affecting biochemical progression (BCP) of advanced prostate cancer patients receiving androgen deprivation therapy in Taiwan.

Methods and Findings: A cohort of men diagnosed with prostate adenocarcinoma ever receiving leuporelin acetate between November 1995 and April 2008 was collected from the computerized registry systems in two medical centers. A total of 107 eligible patients with newly diagnosed advanced (cT3 above) prostate cancer were assessed for the development of BCP and overall survival. All men had initial serum prostate specific antigen (PSA) measurements. Cox regression model and Kaplan-Meier analysis was used to evaluate the relationship between the clinical parameters and the BCP. A total of 54 patients (50.5%) had BCP during a median 46.1 months' follow-up. In a multivariate analysis, initial serum PSA greater than 105 ng/mL (relative risk [RR], 3.23; 95% confidence interval [CI], 1.66-6.29),

Oral Track 3- Clinical Research & Public Health

OT3-01

A Public Opinion Survey of Attitudes toward Genetic Epidemiology and the Taiwan Biobank

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Just as nations around the world have one by one been establishing depositories of genetic materials, with