

OT2-02

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

Chih-Ching Liu¹, Chung-Yi Li², Kai-Ren Chen³

1. Zhong-Xing Branch of Taipei City Hospital, Taiwan

2. National Taipei College of Nursing, Taiwan

3. Fu-Jen Catholic University, Taiwan

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

Yen-Ling Lin¹, Jen-Hau Chen², Ta-Fu Chen², Ping-Keung Yip³, Chi-Yin Hu¹, Yen-Ching Chen¹

1. National Taiwan University, Taiwan

2. National Taiwan University Hospital, Taiwan

3. Cardinal Tien's Hospital, Taiwan

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

Jaeseong Jo, Heejin Kimm, Ji Eun Yun, Kyu Jang Lee, Sun Ha Jee

Yonsei University, South Korea

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

Tengkai Yang¹, Kuo-Liong Chien², Po-Jen Hsiao³, Chun-Hou Liao³, Hung-Ju Yang¹

1. Cardinal Tien Hospital, Taiwan

2. National Taiwan University Hospital, Taiwan

3. Fu-Jen Catholic University, Taiwan

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

Foong Ming Moy, Bulgiba AM

University of Malaya, Malaysia

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

Andi Arsunan Arsin, Hasmar Massalinri

Hasanuddin University, Indonesia

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