

International Conference on

# METABOLOMICS AND DIABETOLOGY

May 23-24, 2018 | New York, USA

## Diabetes mellitus is a strong predictor for post-surgical neuropathic pain: A population-based cohort study

Pei-Shan Tsai

Taipei Medical University, Taiwan

Post-surgical neuropathic pain (PSNP) is observed in herniorrhaphy, mastectomy, amputation or coronary artery bypass grafting (CABG) patients. We elucidated PSNP risk factors using LHID2010, a database includes medical claims data and registration files for 1 million enrollees randomly selected from approximate 24 million registry for beneficiaries of Taiwan's National Health Insurance program. Patients undertook the surgery between January 2000 and December 2012 was included. Patients with a history of PSNP before surgery or age of less than 20 or more than 100 years were excluded. A total of 4647 patients (herniorrhaphy: 2564; mastectomy: 803; amputation: 902; CABG: 378) were included. Patients with at least two ambulatory visits for PSNP treatments were identified as the PSNP subjects. Patients without PSNP diagnosis were identified as the non-PSNP subjects. Subjects were tracked from surgery date until the end of 2013 or loss of follow-up. During 1-14 years of follow-up, PSNP incidence in patients undertook herniorrhaphy, mastectomy, amputation and CABG was 4.6%, 6.8%, 15.5% and 18.8%, respectively. After controlling for the potential confounders, multivariate logistic regression analyses revealed that diabetes mellitus was a strong risk factor of PNSP in patients undertook herniorrhaphy [odds ratio (OR)=30.71], mastectomy (OR=29.80), amputation (OR=54.62) and CABG (OR=209.62) (all  $P<0.001$ ). In herniorrhaphy patients, PSNP risk factors also included hyperlipidemia, anxiety and use of anti-depressants and opioids (OR=1.81, 3.19, 2.35 and 1.78; all  $P<0.05$ ). In mastectomy patients, risk factors also included hyperlipidemia, anxiety and use of anti-depressants (OR=3.84, 4.93 and 2.51; all  $P<0.05$ ). In amputation patients, risk factors also included hyperlipidemia and use of non-steroid anti-inflammatory drugs and acetaminophen (OR=1.93, 12.49 and 13.05; all  $P<0.05$ ). In CABG patients, risk factors also included hyperlipidemia, anxiety and use of anti-depressants (OR=6.06, 4.50 and 3.48; all  $P<0.05$ ). Collectively, data from this population-based cohort study highlighted that diabetes mellitus is a strong predictor for PSNP.

ptsai@tmu.edu.tw