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nan, Taiwan.

Background: Recent studies reported potential risk of atrial fibrillation (AF) from cancer populations receiving intravenous bisphosphonates.

Objectives: To compare the risk of adverse cardiac outcomes among osteoporosis population taking alendronate or calcitonin/raloxifene in Taiwan.

Methods: Enrollees in the National Health Insurance Research Database aged above 50 years who were new users of alendronate, calcitonin/raloxifene between 2003 and 2006 were included. Then, patients with cancer, Paget's disease, cardiac arrhythmia, conduction disorder, cerebrovascular disease and stroke diagnosis were excluded. Every patients were followed from the 1st date they received prescriptions until the occurrence of study outcomes or 2007/12/31. Inpatient claims of AF, SVT (supraventricular tachycardia) or stroke were identified as study outcomes. We calculated a propensity score for the likelihood of receiving alendronate or calcitonin/raloxifene therapy conditional on 45 covariates which were proposed to be related to osteoporosis and study outcomes. Propensity score-matched Cox regression analysis was performed to compare the risk of adverse outcomes between alendronate and calcitonin/raloxifene users.

Results: From 2003–2006, 19,677 patients were new users of study drugs, and 5,679 patients in the alendronate and calcitonin/raloxifene group were matched by propensity score (c-statistic: 0.700). Results from Cox regression showed alendronate users had a trend toward lower AF (HR, 0.805; 95%CI, 0.603–1.075) and SVT (HR, 0.947; 95%CI, 0.797–1.127) risk, as compared with calcitonin/raloxifene users. Moreover, our results showed alendronate users had a significantly lower risk for stroke (HR, 0.740; 95%CI, 0.647–0.846). Similar results were found across series sensitivity analyses, however, an increased but not significant AF risk was found among alendronate users if we restricted patients' cumulative DDDs above 183 (HR, 1.039; 95%CI, 0.688–1.568) and 365 (HR, 1.613, 95%CI, 0.849–3.067).

Conclusions: When targeting osteoporosis population, our results did not observe the association between use of bisphosphonate and adverse cardiac outcomes.

691. The Number of Prescribed Medication Patterns among the Elderly in Different Patient Populations in Taiwan

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Background: The physiologic process of aging and suffering from more illness and disability make the elderly need more attention on medication reconciliation. There is limited information about factors attributable to number of prescribed medications (NPM) under implementation of National Health Insurance (NHI) in Taiwan.

Objectives: To evaluate the NPM patterns among the different patient populations in Taiwan and the contributing factors of NPM.

Methods: The retrospective database analyses were conducted using the datasets from NHI and China Medical University Hospital (CMUH), a 2000-bed medical center, in Taiwan. The NPM, demographic, disease statuses and health utilization among the elderly of NHI random beneficiaries in 2006 and 2007, and for those elderly made visits during November to October among NHI random sample and CMUH regular visitors in consecutive years were examined. The analyses using generalized estimating equations of repeated measures and subgroup analyses for NPM were performed to examine the contributing factors (e.g., months, patient characteristics, medical care utilization).

Results: The average NPM among NHI random beneficiaries across months in 2006 and 2007 were closed to 2.33 and 4.39. After adjusting for other factors, the relative risk of NPM among both populations seemed significantly increased in January and March and among those patients with: aged from 70 to 74, certain common chronic conditions and tendency to make OPD visits, but significantly reduced among visits ever made to ER and hospitalization, as compared to that in August and younger elderly.

Conclusions: There was an incremental trend of NPM among the national elderly population. While acute exacerbations and being admitted to in-patient services might be protecting factors of increasing NPM, more attention should be made toward those high utilization elder patients with specific diseases, for either national or local populations.

692. Therapeutic Failures and Adverse Drug Withdrawal Events Leading to Hospitalization among Older Outpatient Veterans

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