



Service Priorities and Programmes Electronic Presentations

Convention ID: 1156

Submitting author: Dr May P.S. Lam

Post title: Pharmacist, The University of Hong Kong, 0

An evaluation of the association between inappropriate prescribing and drug related hospital admission

Lam MPS (1), Wong ICK (1), Cheung BMY(2)

(1) Department of Pharmacology and Pharmacy, The University of Hong Kong, Hong Kong, (2) Department of Medicine, The University of Hong Kong, Hong Kong

Keywords:

Inappropriate prescribing
drug related hospital admission
Beers criteria
STOPP/START criteria

Introduction

Adverse drug event with inappropriate prescribing is one reason for hospital admissions. Older people are vulnerable to adverse drug events because of polypharmacy. However, association between potentially inappropriate prescribing (PIP) and drug related hospital admission is lacking.

Objectives

To evaluate the association between PIP as listed in explicit criteria (Beers 2012 and STOPP criteria) and drug related hospital admission

Methodology

An observational study with recruitment of 500 patients aged 65 or older who were admitted to the medical wards of an acute tertiary hospital. Their medications were checked against Beers 2012 and STOPP criteria for PIP. Using the amended Hallas criteria for causality and Helper criteria for preventability, causality and preventability were assessed and cases with identified PIP and drug related hospital admissions were tabulated. The main outcome measure was the association between PIP and drug related hospital admission.

Result

3997 medication items were reviewed with a mean of 8 ± 4.5 medications per person. 43 admissions (8.6%) were considered to be drug related and 31 of those were preventable. Hypo- or hyperglycemia were the most frequent drug related reasons for admission and insulin had been identified as the drug most commonly associated (21 out of 43 cases or 48.8%). Prescribing problems (6 out of 31 cases or 19.4%),

monitoring problems (13/31, 41.9%) and adherence problems (12/31, 38.7%) were the main underlying causes of drug related hospital admission. Among all causes, failure to monitor blood glucose accounted for the most common monitoring problem. Among those who were considered to have drug related hospital association, 11 patients were found to have PIP according to STOPP criteria while 7 patients were identified by Beers 2012. Nevertheless, insignificant difference were found between STOPP and Beers 2012 criteria (Wilcoxon signed rank test $Z=-1.27$, $p = 0.206$). In addition, insignificant association was found between PIP identified by the criteria and drug related hospital admissions. In conclusion, polypharmacy is prevalent among Hong Kong older people and medication usage is still a huge concern. Insulin related glycemetic control remained the most common preventable drug related hospital admission. Although more people with PIP as listed by STOPP criteria to have drug related hospital admissions, no association was found among PIP identified by Beers 2012 or STOPP criteria and drug related hospital admission.