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Drug-related problems and use of STOPP/START criteria in prescriptions of geriatric patients attending cardiology clinic and diabetic centre in Teaching Hospital Jaffna

Hasna MH¹, Zumra MSF¹, Madhusinghe HPPS¹, Thuvaragan S^{1*}, Sanchayan K², Samaranayake NR³

¹Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna, Sri Lanka, ²Department of Pharmacology, Faculty of Medicine, University of Jaffna, Sri Lanka, ³Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Sri Lanka.

Background: Monitoring of prescriptions ensures rationale use of medicine and thus it reduce the duration of hospital stay, morbidity, and mortality among the elderly.

Objective: This study determined the prevalence of potentially inappropriate prescribing in geriatric patients by using STOPP/START criteria, the prevalence of possible drug-related problems (prescribing and drug selection related) in patient’s medication records, and factors associated with drug-related problems.

Methods & Materials: This cross-sectional study was conducted in the cardiology clinic and diabetic centre, Teaching hospital, Jaffna among 400 patients who were selected by stratified random sampling technique. The prevalence of potentially inappropriate medications (PIMs) and potential prescription omissions (PPOs) using modified STOPP/START criteria for Sri Lanka, and prevalence of drug-related problems (DRPs) using prescribing and drug selection section of Pharmaceutical Care Network Europe (PCNE) classification V9.1 were assessed from patients records. The Chi-square test was used to compare the factors such as age, gender, polypharmacy and multiple comorbidities with DRPs. P value < 0.05 was considered significant.

Results: Potentially inappropriate medicines (PIMs) and potential prescription omissions (PPOs) were 66 (16.50%) and 140 (35.0%) respectively among 400 current medication lists of the patients. Thus, a total of 206 (51.50%) potentially inappropriate prescribing (PIPs) were identified. A total of 564 drug-related problems were identified and 316 (79.0%) prescriptions had at least one DRP. The mean DRP per prescription was 1.79± 0.845. Polypharmacy (p<0.001) and gender (p=0.001) were significantly associated with prescribing and drug selection section of drug-related problems.

Conclusion: PIMs, PPOs and drug-related problems were found among geriatric patients attending to Teaching Hospital Jaffna. Polypharmacy, gender and non-communicable diseases like type-2 diabetes mellitus and ischemic heart disease showed significant associations with drug-related problems. Monitoring of drugs at prescribing and dispensing level could ensure rationale use of medicines.