

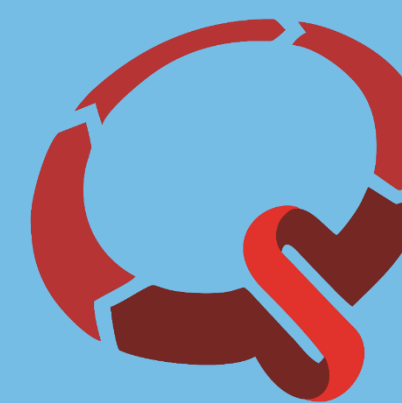


EVALUATION OF CLINICAL OUTCOMES IN HOSPITALIZED ELDERLY PATIENTS USING POTENTIALLY INAPPROPRIATE MEDICATIONS

Y. TRISNA^{1,2}

1 Department of Pharmacy, Cipto Mangunkusumo Hospital, Jakarta, Indonesia

2 The Indonesian Commission for Hospital Accreditation, Jakarta, Indonesia



P859



INTRODUCTION

Elderly patients with multipathology require more medications than any other age group and this makes them more prone to adverse events related to potentially inappropriate medications (PIMs). The American Geriatric Society (AGS) Beers' criteria and Screening Tool of Older Persons' Prescriptions (STOPP) criteria are widely used to identify inappropriate medication use in elderly patients

AIM

The aims of the study were to determine the prevalence of PIMs and to evaluate the clinical outcome of hospitalized elderly patients using medications listed in Beers' and STOPP at a tertiary teaching hospital in Indonesia.

METHOD

A prospective observational study was conducted in the geriatric wards. All patients admitted from November to December 2022 were included. Data collected included age, gender, diagnosis, medication use, and subjective and objective clinical data during hospitalization. The AGS Beers' Criteria (2019 Update) and STOPP criteria version 2 were used to review the prescriptions. The evaluation focused on identifying undesired clinical outcomes of patients using PIMs. Patients identified using PIMs were then monitored to determine whether the application of the tools had clinical relevance. Descriptive statistics were applied to the variables.

RESULTS

A total of 158 patients were included in the study; 8.9% were over 80 years of age and 45% were female. The most common medical problems related to gastrointestinal, respiratory, and cardiovascular disorders. The average number of medications prescribed was 9 ± 3.6 . One hundred and forty of 158 patients (89%) were prescribed at least one PIM. There were 393 PIMs (Beers' criteria or STOPP criteria) identified. The number of PIM per patient ranged between 1 and 8 with a median of 2. The most frequent PIMs prescribed were proton pump inhibitors (22%), calcium channel blockers (9.4%), and beta-blockers (8.0%). Adverse effects suspected to be due to the PIMs occurred in 6 cases (1.4% of the PIMs) involving furosemide, bisoprolol, ketorolac, and methylprednisolone. Most of the PIMs were justified to be used as indicated for dealing with patients' medical problems. Monitoring of the clinical status was able to identify whether or not patients experienced negative consequences due to PIMs.

Age (year)	No. of patient
60-69	103
70-79	41
80-89	13
90-100	1
Total	158

Table 1. Distribution of Age

Medication	Adverse Effect	No. of case
Furosemid	Hyponatremia	3
Ketorolac	GI Bleeding	1
Bisoprolol	Hypotension	1
Methylprednisolone	GI Bleeding	1
Total		6

Table 2. PIMs with clinically significant adverse effects

The study revealed that a significant proportion of elderly patients were prescribed at least one PIM. This raises concerns about the potential risks associated with inappropriate medication use in this vulnerable population. The prevalence of PIMs calls for an in-depth assessment of the prescribing patterns and guidelines followed by healthcare professionals. The study did not explore the justification why certain PIMs were prescribed, but it is crucial to consider the potential role of clinical guidelines and protocols in guiding prescribing behavior. Integrating evidence-based guidelines on appropriate medication use for elderly patients can help reduce the prevalence of PIMs and improve overall patient safety. It is essential to explore whether alternative, safer medications can be used. Balancing the need for appropriate medications while avoiding PIMs is crucial to enhance the quality of care for elderly patients.

Although adverse effects were reported in a small percentage of PIMs (1.4%), it emphasizes the importance of vigilant monitoring and prompt identification of potential harm caused by these medications. Early detection of adverse effects can lead to timely interventions and improved patient outcomes. The study highlights the need for comprehensive and ongoing patient assessment in clinical practice.

CONCLUSIONS

The prevalence of PIMs is high (89%) among elderly patients at a teaching hospital in Indonesia with 1.4% of these medications possibly leading to clinically significant adverse effects. The study highlights the importance of monitoring patients' clinical status to minimize the negative consequences of PIMs.

ACKNOWLEDGEMENT

The author would like to thank Master of Clinical Pharmacy students of Universitas Gadjah Mada, Yogyakarta: Ayuningtyas Galuh P, Cyndi Yulanda Putri, Elfrida Napitupulu, Maria Sri Ayu Mustikawati, and Tofan Aries Mana for collecting data

REFERENCES

- American Geriatric Society, American Geriatrics Society 2019 Updated AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, J Am Geriatr Soc 00:1-11, 2019
- O'Mahony D, STOPP-START v.2: Screening Tool Of Older People's Prescriptions (STOPP), Screening Tool to Alert to Right Treatment (START), accessed from <https://www.cgakit.com/m-2-stoppp-start>, 1 October 2022

CONTACT INFORMATION

Dra. Yulia Trisna, Apt.,M.Pharm



trisna.yulia@gmail.com