PREVALENCE OF MEDICATION-RELATED HOSPITAL ADMISSIONS AT AN AUSTRIAN TERTIARY CARE CENTER

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BACKGROUND AND IMPORTANCE

Medication-related problems (MRPs) represent adverse events arising from the use or misuse of pharmaceuticals, including overdosing, underdosing, adverse reactions, and drug interactions. Up to 30% of hospital admissions worldwide are linked to MRPs[1]. It is estimated that half of these medication-related hospital admissions (MRHAs) are preventable. To date, there is no data reflecting the prevalence and incidence of MRHAs in Austria.

AIM AND OBJECTIVES

This study aimed to evaluate MRHAs at the Department of Emergency Medicine at the University Hospital Vienna, a 1,740-bed tertiary care center, and to identify the underlying causes contributing to these admissions.

MATERIALS AND METHODS

STUDY DESIGN: Retrospective quantitative and qualitative analysis.

TOOLS: AT-HARM10 scale[2], applied by a clinical pharmacist.

DATA SOURCES: electronic patient charts and hospital information system.

SAMPLE SIZE: 422 patients (all patients admitted to the ED over a 5-week period)

RESULTS

PREVALENCE OF MRHA: 13,3% (n=56, 51% female).

TOTAL PATIENTS ANALYZED: 422 (45% female, median age: 54 years)

MAIN CAUSES FOR MRHA: 44% ADRs (prescribed and non-prescribed), 37% due to untreated or suboptimally treated medical indications

DRUG CLASSES ASSOCIATED WITH MRHA: 41% antithrombotic agents, 13% cardiovascular drugs

PREVENTABILITY[3]: 76% preventable (51% potentially, 25% definitely preventable).

SEVERITY [3] : 37% of cases were severe (life-threatening abnormalities or symptoms).

CONCLUSION AND RELEVANCE

More than 10% of hospital admissions can be attributed to a MRP, thereby representing a significant share of all hospital admissions. High-risk medication classes, such as antithrombotic and cardiovascular agents, are particularly associated with MRHAs. With the vast majority thereof being deemed preventable, clinical pharmacists play a pivotal role by optimizing therapy and providing essential interventions that enhance medication safety.

[1] Luttikhuis HM et al., *Eur Geriatr Med*. 2022;13(2):329-337. doi:10.1007/s41999-021-00580-7
[2] Kempen TGH et al., *Int J Clin Pharm*. 2019; 41(1):198-206. doi:10.1007/s11096-018-0768-8
[3] Lea, Marianne et al., *PloS one* vol. 14,7 2019; doi:10.1371/journal.pone.0220071