Prevalence of potentially inappropriate medication use in elderly patients: comparison between general medical and geriatric wards.

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BACKGROUND AND OBJECTIVE: Inappropriate drug use is one of the risk factors for adverse drug reactions in the elderly. We hypothesised that, in elderly patients, geriatricians are more aware of potentially inappropriate medications (PIMs) and may replace or stop PIMs more frequently compared with internists. We therefore evaluated and compared the prevalence of PIMs as well as anticholinergic drug use throughout hospital stay in elderly patients admitted to a medical or geriatric ward.

METHODS: In this retrospective cross-sectional study, 800 patients aged ≥65 years admitted to a general medical or geriatric ward of a 700-bed teaching hospital in Switzerland during 2004 were included. PIMs were identified using the Beers criteria published in 2003. The prevalence of anticholinergic drug use was assessed based on drug lists published in the literature.

RESULTS: The prevalence of use of PIMs that should generally be avoided was similar in medical and geriatric inpatients both at admission (16.0% vs 20.8%, respectively; $p = 0.08$) and at discharge (13.3% vs 15.9%, respectively; $p = 0.31$). In contrast to medical patients, the reduction in the prevalence of use of PIMs between admission and discharge in geriatric patients reached statistical significance ($p < 0.05$). Overall, the three most prevalent inappropriate drugs/drug classes were amiodarone, long-acting benzodiazepines and anticholinergic antispasmodics. At admission, the prevalence of use of PIMs related to a specific diagnosis was not significantly different between patients hospitalised to a medical or a geriatric ward (14.0% vs 17.5%, respectively; $p = 0.17$), as compared with the significant difference evident at hospital discharge (11.7% vs 23.7%, respectively; $p < 0.001$). This was largely because of a higher prescription rate of platelet aggregation inhibitors in combination with low-molecular-weight heparins and benzodiazepines in patients with a history of falls and syncope. The proportions of patients taking anticholinergic drugs in medical and geriatric patients at admission (13.0% vs 17.5%, respectively; $p = 0.08$) and discharge (12.2% vs 16.5%, respectively; $p = 0.10$) were similar.

CONCLUSION: Inappropriate drug use as defined by the Beers criteria was common in both medical and geriatric inpatients. Compared with internists, geriatricians appear to be more aware of PIMs that should generally be avoided, but less aware of PIMs related to a specific diagnosis, and of the need to avoid anticholinergic drug use. However, the results of this study should be interpreted with caution because some of the drugs identified as potentially inappropriate may in fact be beneficial when the patient's clinical condition is taken into consideration.