

20. Are Inappropriate Medications the Major Cause of Adverse Drug Reactions in the Elderly?

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Background: According to the definition, inappropriate medications (IMs) are a major factor influencing the likelihood of adverse drug reactions (ADRs) occurrence in the elderly. The association between IM use and the occurrence of ADRs has rarely been assessed; involved IMs and seriousness of ADRs are not usually detailed.

Objective: To describe and to assess the prevalence of ADRs directly attributable to IMs among elderly patients admitted in an acute medical geriatric unit.

Methods: A prospective drug surveillance study was undertaken in 2018 elderly (≥ 70 years) admitted to an acute care geriatric unit from 1994 to 1999. Prescribing patterns were established on admission. PIM use was assessed according to a list derived from the Beers criteria by a panel of French experts and suited to French practice. Adverse effects were identified and the causality assessment established with the French causality scale. Only 'definite' and 'probable' ADRs were taken into account.

Results: The prevalence of patients receiving at least one potentially IM on admission was 66.0% [95CI: 63.8-68.0]. There were 460 ADRs in 385 patients (19% of the study population); 78.4% of ADRs were classified as type A reactions and ADRs were serious in 57.1% of patients. In 5.9% of IM users, the ADRs were directly attributable to inappropriate drugs. The most frequently involved IMs were: anticholinergic antidepressants, cerebral vasodilators, long-acting benzodiazepines and concomitant use of two or more psychotropic drugs from the same therapeutic class. Only 79 patients suffered from an ADR secondary to an inappropriate drug administration. These ADRs were serious in 70.9% of the cases. Digitalis toxicity was encountered in 33 patients and was responsible of 21 serious ADRs. Conclusion: Inappropriate medication use in the elderly, though worth considering, does not seem to be the major cause of ADR occurrence in the elderly; appropriate drugs are to be thoroughly evaluated prior to administration. More than the appropriateness of the drugs, prescriptions are to be suited to the characteristics of elderly patients who are to be seen in their entirety.