

Abstract

Introduction: Polypharmacy is a widespread phenomenon among the elderly population due to the high prevalence of concurrent chronic diseases. Given the age-related changes in pharmacokinetics and pharmacodynamics, as well as the use of multiple medications, this group is particularly vulnerable to both therapeutic and adverse drug effects. Thus, in this study, we aimed to examine the medication therapy regimens of elderly patients admitted to Ardabil elderly care centers during the second half of 2022, using the 2019 criteria.

Materials and methods: A total of 277 elderly individuals aged 65 years and above residing in nursing homes in Ardabil city were included in this study. Demographic data, clinical information (including medical history such as diabetes, hypertension, and ischemic heart disease), medication history (including herbal supplements), and lifestyle habits such as smoking, and alcohol consumption were collected. The medications used were analyzed using Beer's guidelines and SPSS 2022 software.

Results: Of the 277 participants, 148 (53.4%) were male and 129 (46.6%) were female. The mean age and weight were 74.15 ± 7.43 years and 74.33 ± 12.12 kg, respectively. Approximately 21.7% of the participants were smokers, and 76.9% had visited the emergency room in the previous year. The most common underlying disease was hypertension, which was present in 53.4% of the participants. The highest number of medications used simultaneously was three, which was reported by 15.5% of the participants. Polypharmacy was observed in 52.3% of the participants, and drug overlap was observed in 4.7%. Inappropriate medication use was detected in 45.8% of the participants, with 0.4% receiving more than five inappropriate medications simultaneously. Pantoprazole was the most commonly inappropriately prescribed medication, with a frequency of 14.8%. Digestive medications (20.9%) were the most commonly prescribed inappropriate medication category. The use of inappropriate medications was directly associated with the number of medications used and the number of underlying diseases.

Discussion and conclusion: The findings of this study are consistent with previous research and highlight the high prevalence of polypharmacy and inappropriate medication use among the elderly population. Therefore, it is imperative to pay close attention to drug therapy in this group, including changes in educational curricula, training, and retraining courses for healthcare providers who care for older adults.

Keywords: elderly, polypharmacy, inappropriate drug, benchmarks 2019