

Use of deprescribing to reduce polypharmacy and potentially inappropriate medications in geriatric patients in a tertiary care hospital

Nannuri Vivek Choudary, Sushil Sharma

Abstract:

OBJECTIVES: The objective of the study was to assess the burden of polypharmacy and potentially inappropriate medications (PIMs) among geriatric patients and evaluate the impact of a structured deprescribing approach in these patients.

SUBJECTS AND METHODS: Elderly outpatients (≥ 60 years) with polypharmacy were included. Data on prescribed, over-the-counter (OTC), and traditional medicines were collected through a structured questionnaire and detailed patient interviews. Deprescribing was carried out using Sivagnanam G's "S and S" approach (Seek, Screen, Save, Sever, Sensitize, and Supervise) adapted from Scott *et al.*

RESULTS: Among 385 participants, polypharmacy was prevalent in 182 participants (47.27%) with a mean of 6.5 drugs/prescription. Among participants with polypharmacy, PIMs were noted in 131 (72%) with an average of 1.64 PIMs identified per each inappropriate prescription. PIMs increased with an increase in the number of comorbidities and medication count. A total of 215 PIMs were identified and recommended for deprescribing. These were mainly drugs to be avoided in the elderly (34.88%), OTC PIMs (17.21%), traditional medicines (13.02%), and drug-drug interactions (9.77%). Deprescribing reduced the mean drug count per prescription to 4.86 with a potential to decrease adverse drug reactions by 16.4%, and also lowered daily prescription costs from INR 51.91 to INR 32.70, saving INR 576.42 per patient per month.

CONCLUSION: Polypharmacy and PIMs are widely prevalent among elderly patients, significantly increasing the risk of ADEs. Structured deprescribing effectively reduced medication burden, improved safety, and decreased healthcare costs. These findings highlight the need for routine deprescribing interventions to optimize geriatric medication management.

Keywords:

Deprescribing, polypharmacy, potentially inappropriate medications