

ABSTRACT

Polypharmacy in Geriatric Patients with Diabetes Mellitus: Adverse Drug Reactions' Review

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Geriatrics are elderly patients aged ≥ 60 years with multiple diseases. Geriatrics will naturally face a physiological decline. In several studies stated that geriatric patients with DM were often with multimorbidity and complications. These conditions cause geriatric patients to be prescribed many drugs or polypharmacy (≥ 5 drugs). The use of polypharmacy has been shown to increase the risk of ADRs in geriatric patients. This is caused by pharmacokinetics and pharmacodynamics changes. ADRs in geriatric patients can increase geriatric syndrome. This study aims to identify and analyze the profile of the actual ADRs, causes and solutions in geriatric patients with DM who receive polypharmacy therapy in Airlangga University Hospital, Surabaya. This study used an observational method and was carried out prospectively with descriptive analysis in the period of March 2020 to May 2020. The study was conducted at the Geriatric Unit and Outpatient Pharmacy Installation of Airlangga University Hospital, Surabaya. Based on the results on 70 patients, 23 patients (33%) experienced actual ADRs with total 28 cases. From 23 patients, actual ADRs were hypoglycemia (43%), flatulence (30%), hypotension (13%), headache (9%), abdominal pain (9%), stomach pain (4%), drowsiness (4%), dizziness (4%), bradycardia (4%). From 28 cases, single drug that caused ADRs were acarbose (25%), glimepiride (21%), bisoprolol (11%), insulin glulisine (7%), metformin (7%), nifedipine oros (7%), acetosal (4%), gabapentin (4%), and insulin aspart (4%). Drug combinations that caused ADRs were glimepiride-insulin aspart (4%), bisoprolol-nifedipine oros (4%), and bisoprolol-nifedipine oros-lisinopril (4%). From all of actual ADRs that occurred, 57% cases caused by ADRs specific mechanism, 29% poor diet, 7% non-adherence, 7% dosage too high. Meanwhile, 93% of the problems have been resolved with interprofessional collaboration.

Keywords : Polypharmacy, Geriatric, Diabetes Mellitus, Adverse Drug Reaction