LETTER TO THE EDITOR

Compliance and drug-related problems in probable Alzheimer's disease elderly

Elderly with probable Alzheimer's disease (AD) is more susceptible to Drug Related Problems (DRPs) due to physiological changes (Reeve *et al.*, 2017), cognitive impairment (Mehta *et al.*, 2015) and failure of drug therapy compliance (Smith *et al.*, 2017). Failure of compliance in the elderly with cognitive impairment varies from 10.7% to 38%, while among the elderly with AD from 17% to 100%. (Smith *et al.*, 2017).

In this context, Medication Therapy Management (MTM) is conducted through the identification and resolution of DRPs, evaluation of the therapeutic need, request of examinations of biochemical and physiological parameters for monitoring the effectiveness and safety of drug therapy, based on the underlying disease and the therapeutic experience of the elderly and/or the family/caregiver. Outcomes are also monitored and evaluated.

The MTM was conducted in 55 elderly patients with AD, 39 of whom had compliance problems. After a minimum follow-up of six months and at least six visits/appointments, compliance problems were solved in 30 elderly with AD. The main strategies adopted were medication schedule, unitization of doses per hour of medication intake, substitution for more adequate pharmaceutical form, reminders, and dose adjustments.

The main reasons for non-compliance were the negative therapeutic experience due to adverse drug events and ineffectiveness, mainly due to the mode of use and inadequate pharmaceutical form for the clinical condition, such as dysphagia.

Polypharmacy and the drug therapy complexity have also contributed to compliance problems. Due to lack of caregiver support and/or advanced cognitive impairment of the elderly, only nine elderly with DA remained with compliance problems after the interventions.

The same strategies applied by Oliveira *et al.* solved half of the DRPs identified in the elderly with cognitive impairment and half of them became compliant (Oliveira *et al.*, 2016).

According to our experience, the MTM providing optimal medication compliance in the elderly with AD, besides solving other DRPs: need (48), effectiveness (17) and safety (21) with a resolution efficiency of 0.83, 0.85, and 0.43, respectively.

In addition, the integral evaluation of the MTM allowed for adapting the pharmaceutical forms of the drug therapy of one of the elderly with AD and dysphagia, thus promoting the effectiveness and safety of the drug therapy of depression (sertraline) and hypothyroidism (levotiroxin). The intervention improved the symptoms of major depression and raised the cognitive impairment score. Consequently, the elderly patient was discharged from the governmental protocol of AD (Mastroianni and Forgerini, 2018).

Therefore, it is observed that MTM assessing individual therapeutic needs, prodromal signs and symptoms of AD, and other aging-related comorbidities, has been demonstrated as an effective pharmaceutical service in solving compliance problems and other DRPs.

Conflict of interest

None.

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