

NEURODEM study – Assessment of the iatrogenic alert indicator for nursing home patients with Alzheimer or Alzheimer-like disease

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Introduction

Neuropsychiatric symptoms (NPSs) occur in about 80% of patients during the evolution of Alzheimer's disease and other related dementia and are often one of the reasons these people are placed in nursing homes.¹ Neuroleptic drugs are often prescribed for these NPSs although it is known that their efficacy is low (10-20 %).^{2,3}

In France, in 2008, about 3 % of the elderly general population received neuroleptics compared with 18 % of those with Alzheimer's disease and up to 27 % of those who lived in nursing homes.⁵ In the setting of a national plan for Alzheimer's disease, in 2010 the French National Health Authority (in French: Haute Autorité de Santé; HAS) implemented a programme called 'Alert and Control of the Iatrogenic risk of Neuroleptics in Alzheimer's Disease' (AIM-Alzheimer) to reduce the misuse of neuroleptics in patients with Alzheimer's disease.⁴

Objective

The objective of our study was to evaluate the iatrogenic risk in 30 nursing homes in the west of France and compare this with the 18% reported for the national average in 2008. In addition, the study aimed to increase the awareness of the healthcare professionals in the nursing homes of the need to modify their neuroleptic prescription behaviour to avoid systematic, prolonged and inappropriate prescriptions.

Methods

This study was performed between June the 16th and August the 31th of 2012 in 30 nursing homes in 5 administrative areas in the west of France. Data were collected for all permanent residents aged ≥ 65 years with a prior diagnosis of dementia (Alzheimer or related).

- The primary outcome was the 'Iatrogenic Alert Indicator' (IAI), using the HAS definition.⁴ This was calculated by dividing the number of patients with Alzheimer's disease receiving antipsychotic drugs by the total number of patients with Alzheimer's disease.
- The secondary outcomes were the characteristics of these patients, the characteristics of the nursing homes and the drug and non-drug therapies used to treat NPSs.

Results

Data were collected and analysed from 1022 people with Alzheimer's disease or related dementia living in 30 nursing homes in the west of France. Their mean age was 86.2 years and there were statistically significantly more women than men.

➢ A total of 253 of these patients had a prescription for an antipsychotic drug, thus *the Iatrogenic Alert Indicator was 24.8%*. The type and severity of disease was similar between the patients. *Patients with a prescription of an antipsychotic drug also had a prescription for an anxiolytic more often.*

➢ No other significant differences were seen for other drug treatments: antidepressant, anticholinesterase, NMDA receptors antagonists, hypnotics, anticholinergic agents.

➢ *Older patients (>95 years) had significantly less risk of having a prescription for a neuroleptic than younger patients and men had a significantly higher risk than women.* Patients with severe dementia (Mini-Mental State Examination (MMS) between 3 and 10) were more likely to be prescribed neuroleptics than those with mild dementia (MMS between 20 and 26). Also, *patients receiving anxiolytics were significantly more likely to be prescribed neuroleptics than those not receiving them.*

➢ Residents living in nursing homes proposing ≥ 5 non-drug therapies had a significantly lower risk of having a prescription for an antipsychotic drug than those in nursing homes proposing < 5 (5-10 activities: OR=0.50 (95% CI=0.29-0.85); > 10 activities: OR=0.35 (95% CI=0.16-0.79). Although three of these non-drug therapies, art therapy, sensory therapy and reminiscence therapy, are considered validated and practiced by specifically-trained professionals, patients living in nursing homes where one or two of these three therapies were available were more likely to be prescribed neuroleptics than those living in nursing homes where none of these therapies were available.

Discussion

➢ The results from our study in 30 nursing homes and involving 1 022 patients, show that the percentage of patients receiving an antipsychotic drug was higher than the national average in 2008; 24.8% vs. 18%. This is almost five times higher than the level targeted by the French Alzheimer plan, which was 5%, that reflects the estimated prevalence of psychotic diseases that require neuroleptic treatment.⁴

➢ We identified being male, having a severe form of dementia and taking anxiolytic drug to be positively correlated with having an antipsychotic drug. Patients that aged > 95 years old and those who were resident in a nursing home that proposed ≥ 5 non-drug therapies were less likely to be prescribed a neuroleptic.

➢ Our results are consistent with other studies that have reported similar high percentages of patients with Alzheimer's disease receiving antipsychotic drugs in a nursing home setting.⁵ One study reported that old age (≥ 95 years) was negatively correlated with antipsychotic drug prescription but independently reported a positive correlation for anxiolytic use.

Conclusion

The Iatrogenic Alert Indicator in this large study in 30 nursing homes, involving more than 1000 patients, was higher than the national average in 2008 and was five times the target in the French National Alzheimer Plan for 2012. Despite the educational activities already implemented, there is need to increase educational interventions on the good use of antipsychotic drugs in patients with Alzheimer's disease and the use of non-drug therapies as an alternative to antipsychotics.

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