



ORIGINAL ARTICLE

Consumption trends for specific drugs used to treat dementia in the region of Madrid (Spain) from 2002 to 2012^{☆,☆☆}



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KEYWORDS

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Drug utilization;
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Abstract

Introduction: Analysing drug consumption in large population groups lets us observe consumption trends and compare them between different settings.

Objective: To analyse the time trends for consumption and costs of specific drugs used to treat dementia in the region of Madrid (Spain) and compare trends by sex and age cohort.

Methods: Descriptive study of cholinesterase inhibitors (N06DA) and memantine (N06DX01) dispensed in Madrid between 2002 and 2012 and covered by the Spain's national health system. Consumption was calculated by analysing changes in DDD (defined daily doses) to find total and yearly increases. The cost was estimated based on DDD price. To compare consumption rates by age and sex, we calculated DDD per 100 inhabitants/day.

Results: Between 2002 and 2012, consumption of drugs used to treat dementia increased six-fold. During this period, cholinesterase inhibitors accounted for 76.70% of the drugs consumed and memantine, 23.30%. The estimated cost rose by a factor of 5.7 over 11 years (or by a factor of 4 taking into account the use of generic drugs).

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In 2012, 2.42% of the patients aged 65 or over consumed cholinesterase inhibitors (women 2.82%, men 1.83%) and 0.90% consumed memantine (women 1.10%, men 0.61%). Consumption increased in age cohorts up to 86 to 90 (5.84% for cholinesterase inhibitors and 2.33% for memantine) and declined thereafter.

Conclusions: Consumption of cholinesterase inhibitors and memantine gradually increased, but consumption in 2012 did not reach levels equivalent to dementia prevalence figures. Pharmaceutical expenditure restraint measures may temporarily slow the cost increase temporarily but if the same trend of consumption persists, costs will rise.

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PALABRAS CLAVE

Demencia;
Anticolinesterásicos;
Memantina;
Farmacoepidemiología;
Uso de fármacos;
Coste

Evolución del consumo de fármacos específicos para la demencia en la comunidad autónoma de Madrid durante el periodo 2002-2012

Resumen

Introducción: El análisis del consumo de fármacos en grandes grupos poblacionales permite ver tendencias de consumo y comparar diferentes ámbitos.

Objetivo: Analizar la tendencia temporal de consumo y costes de fármacos específicos para la demencia en la comunidad autónoma de Madrid (CAM) y comparar por grupos de edad y sexo.

Métodos: Estudio descriptivo, seleccionando anticolinesterásicos (N06DA) y memantina (N06DX01) dispensados en la CAM del 2002 al 2012 con cargo al Sistema Nacional de Salud. El consumo se calculó analizando la evolución de las dosis diarias definidas (DDD), con incrementos totales y anuales. El coste se estimó por precio de DDD. Para comparar el consumo por edad y sexo, se calcularon las DDD por 100 habitantes-día.

Resultados: Del 2002 al 2012 se multiplicó por 6 el consumo de fármacos para la demencia. El 76,70% de los fármacos consumidos en este periodo fueron anticolinesterásicos y el 23,30% memantina. La evolución del coste estimado se multiplicó por 5,7 en 11 años (por 4 considerando utilización de fármacos genéricos).

En 2012, el 2,42% de los mayores de 65 años consumió anticolinesterásicos (2,82% mujeres, 1,83% hombres) y el 0,90% memantina (1,10% mujeres, 0,61% hombres). El consumo aumentó hasta los 86-90 años (5,84% en anticolinesterásicos; 2,33% en memantina), disminuyendo posteriormente.

Conclusiones: El consumo de anticolinesterásicos y memantina aumentó progresivamente, sin alcanzar en 2012 cifras equivalentes a la prevalencia poblacional de demencia. Las medidas de contención de gasto farmacéutico pueden frenar el aumento del coste, aunque este volverá a crecer si persiste la misma tendencia temporal de consumo.

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Introduction

Dementia prevalence is approximately 6.4% in patients older than 65 years, and it increases with age, from 0.8% in patients aged 65 to 69, 10% in patients older than 70 years, and 25% to 54% in the group of patients aged 90 or older.¹⁻³ Alzheimer disease (AD) is the most frequent type of dementia and the main cause of disability among elderly patients. It places a significant burden on caregivers and generates social costs which increase as the disease progresses.^{4,5} Researchers estimate that some 600,000 people have dementia and 400,000 people have AD in Spain.² According to the ECO study,⁶ the average monthly cost per patient is 1425 euro. Almost 88% of the cost of illness corresponds to informal care, which is borne by the patient's own family. This percentage is higher than the European average, which is about 56%.⁷ Healthcare costs include pharmacological treatments, as well as diagnostic tests, office visits, hospitalisation, and institutionalisation.

Since there is no curative treatment for dementia, treatment approach is focused on treating cognitive impairment symptoms, as well as behavioural and psychological symptoms. Its target is also to prevent complications and functional disability, and manage comorbidities. Acetylcholinesterase inhibitors (AChEI) are indicated as specific treatment for mild to moderate AD.⁸⁻¹⁰ These include donepezil (marketed in Spain since 1998), rivastigmine (since 2000), and galantamine (since 2001). Memantine, a non-competitive N-methyl-D-aspartate (NMDA)-receptor antagonist, was authorised in 2003 for use in mild to severe AD.⁸⁻¹⁰ AChEI and memantine can be administered in combination, but studies yield contradictory results.^{8,10-12} In addition to AD, both drugs can be used to treat vascular dementia, and diseases with Lewy bodies (dementia with Lewy bodies and Parkinson's disease), but they are not indicated to treat frontotemporal dementia.^{8,9}

Their effects are modest and temporary and not all patients respond to treatment.¹³ However, according to

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