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Article

Evolution of the prevalence and incidence of consumption of antidepressants in a Spanish region (2002–2007)

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ABSTRACT

Background The treatment of depressive disorders involves the administration of drugs of proven efficacy at the correct doses and for specific periods of time, in conjunction with psychotherapeutic support.

Aim To assess the evolution of the consumption of antidepressants in the Health Region of Lleida (Spain).

Method A retrospective cohort study of the antidepressant medication prescribed via the Spanish National Health System in the Health Region of Lleida between 2002 and 2007. The variables recorded in the study were age, sex, number of patients in antidepressant treatment in the Health Region of Lleida, length of treatment and type of drug. The prevalence of the population of the health region who were receiving antidepressant drugs and the incidence for each particular year was calculated.

Results The mean prevalence of patients in treatment with antidepressant drugs was 8.5% (5% in men and 12.1% in women). The highest prevalence was observed in the higher age groups. By therapeutic groups, selective serotonin reuptake inhibitors (SSRIs) were the most frequently prescribed, five times more than the next group, tricyclics/heterocyclics. The follow-up assessment of the medication prescribed showed that one out of every four patients did not continue treatment after the first month, and 38.4% did not continue after three months. Very few were treated for more than six months.

Conclusion This study stresses the high rate of antidepressant treatment in the older women's group. One of every four treatments initiated did not last more than one month. Over the six-year period, 16 506 patients dropped out of treatment.

Keywords: antidepressant consumption, prevalence, primary care, psychological treatments

Introduction

Depression is one of the commonest psychiatric disorders. Reports by the WHO suggest that, together with cardiovascular diseases, depression is the most frequent medical cause of disability. Studies performed in our geographical setting predict a lifetime prevalence of major depressive disorder of between 10.5% and 14.3%.[1–3] One of these studies (the ESEMeD-Spain project, with a sample of 5473 subjects) associated mental disorders with female sex, separated, divorced or widowed marital status, disability due to illness and unemployment.[2]

Depression is thus a major health problem which has a significant impact on patients' quality of life and also incurs high social costs, in terms of both health resource use and loss of productivity.

The treatment of depressive disorders involves the administration of drugs of proven efficacy at the correct doses and for specific periods of time, in conjunction with psychotherapeutic support. The prescription of antidepressants has risen in recent years. There have also been notable changes in their patterns of use as certain brands have established themselves in the market, while other new drugs and new indications have been introduced. Nonetheless, there is widespread agreement that the diagnosis and treatment of the illness continue to pose problems.

To assess the evolution of the consumption of antidepressants in the Health Region of Lleida, Spain, we designed a study of patients who received treatment between 2002 and 2007. Variables analysed were the type of drug prescribed, prevalence and incidence of the consumption of antidepressants by age group and sex.

Methods

We designed a retrospective cohort study of the antidepressant medication prescribed via the Spanish National Health System in the Health Region of Lleida between 2002 and 2007. In Catalonia the use of a health card has been mandatory to obtain medication via a Social Security prescription since October 2001. The commercial presentations of the antidepressants are the ones included in group N06A[4] of the ATC Anatomical Therapeutic Chemical Classification System, which was adopted by the WHO in 1996 and has been official in Spain since 2003. At all times the confidentiality of the data was ensured.

The pharmacy offices computerised the following data provided from the prescriptions: the health area, patient characteristics and personal identification code (PIC), which includes age and sex, and the drug prescribed.

The variables recorded in the study were: age, sex, number of patients on antidepressant treatment in the Health Region of Lleida, length of treatment and type of drug prescribed. The population data were obtained from the local census updated with more recent information provided by the Statistics Institute of Catalonia. As in other studies of medication use, the prevalence was calculated as the proportion of the population of the health region who were receiving antidepressant drugs. The incidence for each particular year was calculated as the proportion of the population at risk (obtained from the census data) who were prescribed antidepressants for the first time during the study period.

In the reorganisation of the Catalan health regions carried out in 2005, the health region of Lleida was divided into two (Upper Pyrenees/Aran and Lleida). In spite of this administrative change, our study focused on the entire region of Lleida between 2002 and 2007. Qualitative variables are expressed in proportions and quantitative variables in means and standard deviation.

Results

The mean prevalence of patients in treatment with antidepressant drugs was 8.5% (5% in men and 12.1% in women). According to year, the distribution was 8% in 2002, 8.4% in 2003, 8.8% in 2004, 8.4% in 2005, 8.4% in 2006 and 8.7% in 2007. In all, 63 042 patients were exposed to antidepressant drugs during the six-year period. From 2002 to 2007, the percentage of subjects in treatment rose by 21.3% (17.2% in men and 23% in women); however, this does not reflect a substantial increase in prevalence, since the census records show a significant rise in the region's population during these years. Figure 1 shows the evolution in the number of patients by sex. The preponderance of women remained constant throughout the study. This shows that most antidepressants are prescribed to those aged >24 years. The trend increases with age in all the groups. The highest prevalence was observed in the higher age groups, increasing progressively to the peak figure recorded in the over 84-year-olds (Table 1). Table 2 shows the data on incidence, which fell from 3.2% in 2003 to 1.9% in 2007. In recent years, the incidence in women has been almost twice that in men. Table 3 shows the distribution by age group. As

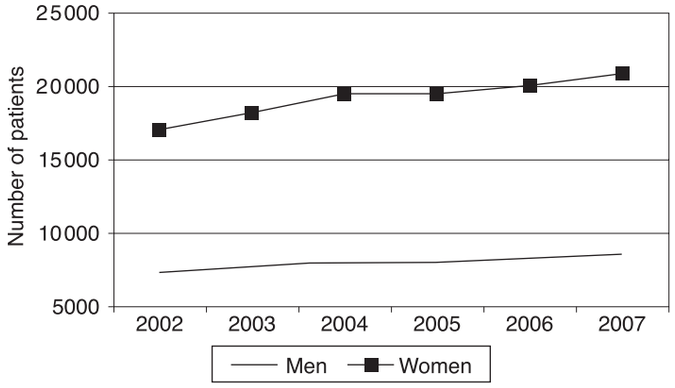

Figure 1 Evolution of the number of patients receiving antidepressant treatment by sex, 2002 to 2007

Table 1 Annual prevalence (%) of patients receiving antidepressant treatment

Age groups	Year					
	2002	2003	2004	2005	2006	2007
0–14 years	0.35	0.39	0.42	0.36	0.37	0.31
15–24	2.50	2.70	2.74	2.44	2.32	2.48
25–34	4.48	4.65	4.89	4.34	4.10	4.42
35–44	6.84	7.31	7.66	7.15	6.92	7.15
45–54	9.84	10.19	10.65	10.40	10.53	10.56
55–64	13.00	13.99	14.80	14.12	14.38	14.73
65–74	14.60	15.08	15.39	15.98	16.24	16.86
75–84	18.39	19.78	20.63	20.55	20.81	21.13
>84 years	18.82	21.00	22.19	22.47	22.39	23.50

Table 2 Incidence rate (%) by sex, 2003–2007

Year	Men	Women	Global
2003	2.2	4.2	3.2
2004	1.9	3.6	2.8
2005	1.6	2.8	2.2
2006	1.4	2.4	1.9
2007	1.4	2.4	1.9

with incidence, prevalence increases with age. Paroxetine was the most frequently prescribed active principle, but over the six years of the study escitalopram showed the largest increase, one of 221%. Citalopram use rose by 53% and venlafaxine use by 21%. From 2004 onwards, falls were recorded for paroxetine (2.3%), fluoxetine (26.7%), and sertraline (31%) (Figure 2). By therapeutic groups, SSRIs were the most frequently prescribed – five times more

Table 3 Annual incidence rate (%) by age group

	Year				
Age	2003	2004	2005	2006	2007
0–14	0.3	0.3	0.2	0.3	0.2
15–24	1.6	1.5	1.2	1.2	1.3
25–34	2.3	2.2	1.8	1.5	1.7
35–44	3.2	2.9	2.2	1.9	1.9
45–54	3.9	3.3	2.6	2.3	2.2
55–64	4.6	3.8	3.2	2.7	2.6
65–74	4.7	3.9	3.4	2.9	2.7
75–84	6.3	5.3	4.1	3.7	3.5
>84 years	7.1	6.1	4.5	3.8	3.8

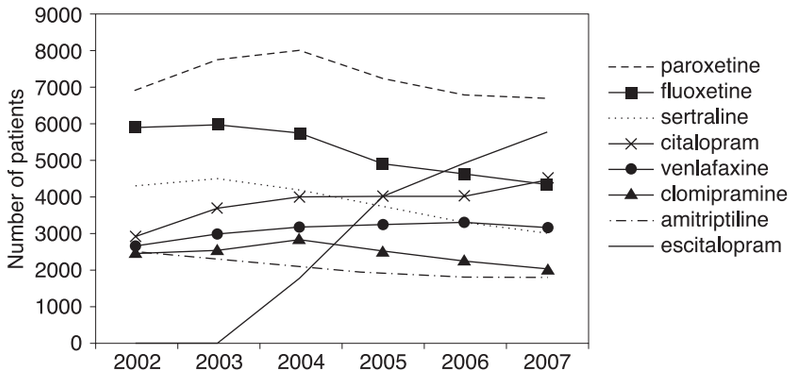

Figure 2 Drug prescription by numbers of patients – evolution from 2002 to 2007

often than the next most frequent group, tricyclics/heterocyclics.

The follow-up assessment of the medication prescribed showed that one out of every four patients did not continue treatment after the first month (16 506 patients in six years), and 38.4% did not continue after three months. Figure 3 and Table 4 show that most users are administered only short-term treatment (much less than four months) and that very few are treated for more than six months.

Discussion

The prevalence of patients receiving treatment with antidepressant drugs rose from 8% in 2002 to 8.7% in 2007, with an increase in the total number of patients receiving antidepressant treatment over the same period of 21.3%. The incidence fell during this period from 3.2% to 1.9%.

Among the limitations in the data collection we should mention the possible loss of some non-Social Security prescriptions and medications provided without prescription. Prescriptions of this kind are estimated to represent around 2.2% of the total in our health region, and so, given the universal coverage offered by the public health system,[5] these figures are unlikely to have affected the results of the study. In addition, the estimation of the prevalence of an illness based on drug consumption data is a validated method, similar to those used in other epidemiological studies.[6,7]

Our mean prevalence of patients in treatment with antidepressants is considerably higher than the prevalence of illness recorded by the European study of mental illnesses, ESEMeD 2004[8] – 8.5% compared

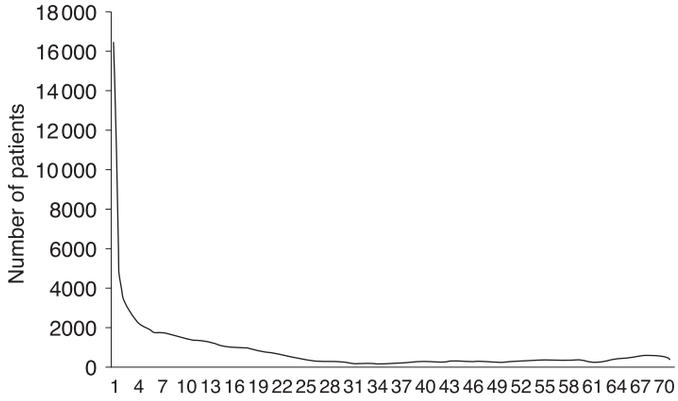

Figure 3 Number of patients receiving treatment according to month of follow-up (2002–2007)

with 4.2%. This may be due to the fact that these drugs may also have been prescribed in cases of bulimia nervosa, panic attacks, obsessive-compulsive disorder, somatoform disorders, premenstrual syndrome and generalised anxiety,[9] in addition to cases of depressive disorder. However, these other illnesses affect less than 2.6% of the population and so cannot account for the high figure of patients in treatment. It has also been estimated that around 50% of the prescriptions of antidepressants in primary care are made for subjects who do not meet the criteria for psychiatric diagnosis.[10]

The fall in the incidence of antidepressants between 2003 and 2007 may be due to a saturation effect in the first years of the study, caused by the presence of chronic patients with poor adherence to treatment or relapses of previous cases. These data are in agreement with those presented by other authors.[11]

The distribution by sex was 5% in men and 12.1% in women. The annual prevalence of consumption was higher in women in all age groups (Figure 1). In all studies, higher values have been obtained in women than in men, and in fact a similar distribution to ours was reported in an Italian study.[12] The greater consumption in women could be due to the fact that they visit their doctor more often (and therefore the likelihood of detection and diagnosis is greater) or due to a higher rate of prescription induced by the patients themselves.[13] Bearing in mind the higher prevalence of women who perceive their health as poor, this high consumption does not come as a surprise: the higher rate of prescription and consumption of psychotropic drugs in women is attributed to a possible gender bias that may lead doctors to attribute physical symptoms (or atypical symptoms) to psychological factors which occur more often in women than in men, or due to the tendency to prescribe higher quantities of drugs to women than to men in the case of low intensity depressive symptomatology.[14] The most important point here is that women's emotional distress is medicalised. Betty Friedan, in *The Feminine Mystique*, noted that women's unease with their lives was due to the restriction of their opportunities and the obligation of fulfilling their roles as housewives and mothers, especially in the lower social classes. She called this unease 'the problem that has no name', as the women she interviewed complained in different ways but did not know what was happening to them.[15]

Table 4 Percentages of patients according to months of antidepressant treatment

Up to:	%
1 month	26.18
2 months	33.89
3 months	38.45
4 months	41.95
5 months	44.99
6 months	47.74

Another factor that may contribute to the increase in the prescription of antidepressants in our region is the limited access to psychotherapy at our primary care centres. The *Guide for the Treatment of Depression* published by the National Institute for Clinical Excellence (NICE), recently updated,[16] notes among its recommendations that in mild depression psychosocial and psychoeducational support should be preferred to treatment with antidepressants, at least as a first option. In a meta-analysis, Kirsch *et al* concluded that there are few reasons for prescribing antidepressants such as fluoxetine, venlafaxine,

nefazodone and paroxetine for depression, except in patients with more severe illness or when the alternatives have proved ineffective. The results suggest that the differences in efficacy between antidepressants and placebo increase depending on the baseline severity, although the efficacy is relatively low even in the most severe forms. This relation between initial severity and antidepressant efficacy should be attributed to a lower response to placebo among the more severe patients rather than to an increased response to the drugs.[17]

The analysis of prescriptions according to therapeutic groups shows a preponderance of SSRIs, followed by tricyclics/heterocyclics, until 2006; at this point, tricyclics/heterocyclics were overtaken by new generation antidepressants. Overall, SSRIs were prescribed five times more frequently than other antidepressants. There was a progressive increase in the prescription of SSRIs (20.6%) until 2006, at which point their prescription rate began to fall. The new generation antidepressants (reboxetine, mirtazapine, duloxetine and venlafaxine) increased by 99.2%. The reason for the increase in the use of these drugs must be their aggressive marketing, since the various antidepressants available do not appear to present significant differences in terms of their efficacy.[18] Spain is the EU country with the highest proportion of new products on the market, even though many do not represent a true innovation.

A more detailed analysis of the active principles shows that the first five are SSRIs: paroxetine, fluoxetine, citalopram, sertraline and escitalopram. The next is an SNRI, venlafaxine, followed by the tricyclics (Figure 2). We should stress the substantial increase in prescription of new drugs such as escitalopram (Figure 2), with an advertising campaign that claimed faster action and a 221% increase in its use since its commercialisation in 2004. Indeed, from 2004 onwards, the prescription rates of classical SSRIs such as fluoxetine, paroxetine and sertraline all fell. These data confirm the tendency for new drugs to be prescribed almost immediately after their introduction on the market.[19]

One of every four treatments initiated did not last more than one month. Over the six-year period, 16 506 patients dropped out of treatment. This high proportion was not due to the frequency of secondary effects attributed to these drugs; nor would these drugs have been indicated for such a short treatment period (except in the case of treatment as analgesic coadjuvant, but this would not have justified such a high number of cases). Some studies report drop-out rates with antidepressant treatment similar to those recorded with chronic pathologies. Non-adherence is associated with a future recurrence of the illness.[20]

Substantial increases in antidepressant prescribing have been observed in the United Kingdom and elsewhere.[21,22] In April 2006, a programme was launched in the UK to encourage doctors to make routine use of the symptom severity scales in depressed patients before prescribing an antidepressant. The justification for the programme lies in the finding that the quality of care received by patients with depression is low or poor, due to limited knowledge regarding diagnosis and treatment. This contract aims to improve antidepressant prescribing practices and follows the recommendations of clinical guidelines that recommend their use only in patients with moderate or severe depression.[23,24]

This study stresses the high rate of antidepressant treatment in the older women's group. We recommend the design of further studies to identify the best therapeutic options for this population and to assess the efficacy of antidepressant treatment in view of the high level of prescription. Other lines of research that should be followed are the differences between the drugs in terms of adherence to treatment, their efficacy and the factors that cause the high level of treatment dropout.

REFERENCES

1 Serna Arnáiz C, Galván Santiago L, Gascó Eguíluz E, Santafé Soler P, Martín Gracia E and Vila Parrot T. Evolution in consumption of anti-depressants during the years 2002 to 2004. *Atencion Primaria* 2006; 38:456–60.
2 Haro JM, Palacín C, Bernal M *et al*. Grupo ESEMeD-España. Prevalence of mental disorders and associated factors: results from the ESEMeD-Spain study. *Medicina Clinica* 2006;126:445–51.
3 Aragones E, Pinol JL, Labad A, Folch S and Melich N. Detection and management of depressive disorders in primary care in Spain. *International Journal of Psychiatry in Medicine* 2004;34:332–43.
4 *Nomenclator Digitalis*. Madrid: INSALUD, 2000. Available at: www.msc.es/profesionales/farmacia/presentacion.htm
5 Ley 14/1986. *Ley General de Sanidad*. BOE núm. 112, 24 April 1986.
6 Sartor F and Walckiers D. Estimate of disease prevalence using drug consumption data. *American Journal of Epidemiology* 1995;141:782–7.
7 Von Korff M, Wagner EH and Saunders K. A chronic disease score from automated pharmacy data. *Journal of Clinical Epidemiology* 1992;45:197–203.
8 Alonso J, Angermeyer MC, Bernert S *et al*. Psychotropic drug utilization in Europe: results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. *Acta Psychiatrica Scandinavica* 2004;420(Suppl.):55–64.
9 Isacsson G, Boethius G, Henriksson S, Jones JK and Bergman U. Selective serotonin reuptake inhibitors have broadened the utilization of antidepressant

treatment in accordance with recommendations. Findings from a Swedish prescription database. *Journal of Affective Disorders* 1999;53:15–22.
10 Ortiz Lobo A and Lozano Serran C. El incremento en la prescripción de antidepresivos. *Atencion Primaria* 2005;35:152–5.
11 Raymond C, Morgan S and Caetano P. Antidepressant utilization in British Columbia from 1996 to 2004: increasing prevalence but not incidence. *Psychiatric Services* 2007;58:79–84.
12 Sans S, Paluzie G, Puig T, Balaña L and Balaguer-Vintró I. Prevalencia del consumo de medicamentos en la población adulta de Cataluña. *Gaceta Sanitaria* 2002;16:121–30.
13 Ruiz-Cantero M, Verdú-Delgado M. Sesgo de género en el esfuerzo terapéutico. *Gaceta Sanitaria* 2004; 18:118–25.
14 García MM, Fernández I and Mateo I. Las mujeres como usuarias de los servicios sanitarios. In: Aguiar F, García I, Pérez M (eds) *La Situación Social de las Mujeres en Andalucía 1990–2000*. Sevilla: Instituto Andaluz de la Mujer, Consejería de la Presidencia, 2001, pp. 25–37.
15 Friedan B. *La Mística de la Feminidad*. Madrid: Jucar, 1974.
16 National Institute for Clinical Excellence. *Management of Depression in Primary and Secondary Care*. London: National Institute for Clinical Excellence, 2004. guidance.nice.org.uk/CG23
17 Kirsch I, Deacon BJ, Huedo-Medina TB, Scoboria A, Moore TJ and Johnson BT. Initial severity and antidepressant benefits: a meta-analysis of data submitted to the Food and Drug Administration. *PloS Medicine* 2008;5:45.
18 Mottram P, Wilson K and Strobl J. Antidepressants for depressed elderly. *The Cochrane Library* 2008; 3:11–16.
19 Garrison GD and Levin GM. Factors affecting prescribing of the newer antidepressants. *Annals of Pharmacotherapy* 2000;34:10–14.
20 Holma IA, Holma KM, Melartin TK and Isometsa ET. Maintenance pharmacotherapy for recurrent major depressive disorder: five-year follow-up study. *British Journal of Psychiatry* 2008;193:163–4.
21 Moore M, Ming Yuen H, Dunn N, Mullee MA, Maskell J and Kendrick T. Explaining the rise in antidepressant prescribing: a descriptive study using the general practice research database. *British Medical Journal* 2009;339:b3999.
22 Olfson M, Marcus SC, Druss B, Ellinson L, Tanielian T and Pincus HA. National trends in the outpatient treatment of depression. *Journal of the American Medical Association* 2002;287:203–9.
23 Kendrick T, King F Albertella L and Smith PWF. GP treatment decisions for patients with depression: an observational study. *British Journal of General Practice* 2005;55:280–6.
24 National Institute for Clinical Excellence. *Depression: management of depression in primary and secondary care. Clinical Practice Guideline No. 23*. London: National Institute for Clinical Excellence; 2004.

AUTHORS' CONTRIBUTIONS

CS participated in the design and the coordination of the study and helped to draft the manuscript. JR participated in the statistical analysis and helped to draft the manuscript. IC, LG, EG and JSG participated in the design of the study, interpreted the results and helped to draft the manuscript. All authors read and approved the final manuscript.

CONFLICTS OF INTEREST

None.

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