Trends in depression diagnosis and consumption of antidepressants in Lithuania in 2004–2009

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Background. One in five people affected by depression will not recover fully from a first episode, and in 70–80% of those achieving remission, depression will recur. The aim of this study was to evaluate the consumption of antidepressants during six years (2004–2009) in Lithuania, to analyze the trends in the diagnosis of depression and its compliance with the use of antidepressants for the future investigation of rationalizing medicamentous depression treatment costs in Lithuania opportunities.

Materials and methods. Data on the total sales of antidepressants were obtained from the IMS (Intercontinental Marketing Service) Health Incorporated. The data were calculated by the DDD (Defined Daily Dose) methodology and expressed in DDDs per 1,000 inhabitants per day. Data on depression diagnosis were obtained from the National Psychiatric Health Centre and expressed as the number of diagnoses in total and by depression types and gender.

Results. The total consumption of antidepressants increased from 10.17 DDD / 1000 inhabitants / day in 2004 to 15.0 DDD / 1000 inhabitants / day in 2009. The number of total depression diagnoses increased by 12%. The number of first time diagnosed depression increased not as significantly as relapsed depression diagnoses – by 27%. In 2009, women were diagnosed with depression 4.5 times more frequently than men. Moreover, depression relapse numbers grew up by 33% during the six study years among women.

Conclusions. During the study period, the consumption of antidepressants increased by 48%. Women were diagnosed with depression more frequently than men. The results of our study show that the number of depression diagnoses are growing because of depression relapse in women.

Key words: antidepressants consumption, depression relapse, pharmacoeconomics

INTRODUCTION

Depression is common, costly, treatable, and has a major influence on the quality of life (1). As far back as 1997, the World Health Organization considered depression as the second greatest cause of disability in the world (2).

Medical conditions like depression, which are chronic or follow a pattern of remission and relapse, are associated with illness-related burdens that fall into two broad categories. The first is the burden of ill-health experienced by the person affected, including discomfort, pain or distress, or difficulties in carrying out the activities of daily life. The second is the wider economic burden which includes the cost of providing health and social care, loss of productivity and time off work, the burden on caregivers, and loss of wages or reliance on state benefits. In this context, depression has been described as a condition that is “chronic and recurrent in nature, impairs family life, reduces social adjustment, and is a burden on the community” (3). The burden of depression is high partly because it is very...
The long-term recurring nature of depression magnifies its achieving remission, depression will recur at least once. In 70–80% of those achieving remission, depression will recur at least once. The long-term recurring nature of depression magnifies its wider economic burden (5, 6).

In recent years, an increasing number of cases of recurrent depression is recorded, which greatly increases the overall number of patients with this disease. The number of suicides also increases together with the spreading depression; e.g., 59 thousand of people killed themselves because of the impact of depression in 2006 in the whole Europe (7).

The use of antidepressants has increased in all Western countries during the past 15–20 years. The defined daily dosages were developed as a tool for presenting drug consumption figures and have been used for many years in drug utilization studies where they are useful for both national and international comparisons of drug consumption and the evaluation of long-term trends in drug use. In Finland, the increase between 1990 and 2006 was nearly 8-fold (8), i.e., from 7.09 defined daily doses (DDD) expressed for 1 000 inhabitants a day in 1990 to 55.47 DDVs in 2006. Similar trends have been reported elsewhere (9).

Although the consumption of antidepressants at the population level has increased notably, population-based studies with all psychotropics and antidepressants in particular suggest that increased prescribing may not have markedly improved the mental health of the population. In Scotland, for example, national development targets have already been made for reducing the increase in antidepressant use. On the other hand, underutilization of antidepressants among the depressed remains a constant concern since epidemiological evidence shows that depressive individuals do not receive the care they need. Further, the impact of antidepressant utilization rates on suicides is discussed (10).

The aim of this study was to assess the antidepressant consumption patterns in six years (2004–2009) in Lithuania, to analyze their use within different antidepressant groups, trends in the diagnosis of first-time and relapsed depression and their compliance with antidepressant sales for the future investigation of the possibilities to rationalize the costs of medicamentous treatment of depression in this country.

RESULTS

The total consumption of antidepressant drugs in Lithuania increased by 48% in six years (from 10.17 DDD/1000 inhabitants / day in 2004 to 15.10 DDD / 1000 inhabitants / day in 2009) (Fig. 1). Changes of consumption within antidepressant classes in six years (2004–2009) are the following (Fig. 1):• the proportion of consumption of TCAs declined by 42% (from 2.03 to 1.18 DDD / 1000 inhabitants / day); • the consumption of SSRIs showed a pronounced increase of 45% (from 6.38 to 9.25 DDD / 1000 inhabitants / day); therefore, SSRIs were the most widely used antidepressants;
the consumption of newest drugs classified as “other antidepressants” increased significantly (almost three times) over the study period (from 1.61 to 4.63 DDD / 1000 inhabitants / day). However, this is associated with the expanded use of mirtazapine, tianeptine, bupropion and venlafaxine as in 2004 bupropion and venlafaxine have appeared in the antidepressants segment;

- there were modest changes in the consumption of lithium.

A comparison of the proportions of different antidepressant classes has shown that the proportion of SSRIs remained almost the same (62%), although their consumption has increased, while the proportion of other (newer) antidepressants increased almost two times and comprised 31% of the total market.

Over the study period, the consumption of sertraline remained on the top of the list. Besides, the results show that the proportion of sertraline consumption decreased from a quarter of all antidepressants (24.5%) to 22.6%, and in parallel the proportion of amitryptiline consumption declined more than by half – from 14.33% to 6.71%. The use of paroxetine, mirtazapine and escitalopram increased, whereas the use of other SSRIs (fluoxetine, citalopram, fluvoxamine) decreased.

The number of total depression diagnoses increased from 20.381 in 2004 to 22.821 in 2009.

The number of first-time diagnosed depression (F32) grew up not as significantly as the number of relapses (F33) – from 8 300 in 2004 to 10 514 in 2009 (Fig. 2).

The results show that in 2009 women were diagnosed with depression 4.5 times more frequently than men. Moreover, depression relapse numbers grew up by 33% during the study years among women, while in men the number of relapsed depression cases was almost the same (Figs. 3, 4).
Depression and especially its relapse have a great impact on the quality of life. The results of our study show an increase in the consumption of antidepressants during 2004–2009. Does this mean that if we go back to 2004 depression treatment schemes, we would save money and get a more effective treatment? Investigations should be performed in future to test this hypothesis.

Each year there are more cases of depression diagnosed in Lithuania. The statistics of diseases demonstrates a continuously increasing number of recurrent depression diagnoses.

According to data of researchers from the University of Virginia (USA), this disorder is recurrent even for 50% of those with depression and those who have been treated. Other figures are more daunting: after a repetitive treatment of depression, about 70% of patients and after three treatments even 90% fall into depression for the third time. Each recurring disease means that a previous treatment was unsuccessful (16).

The biggest impact on consumption growth was made by the use of SSRIs and the newest "other antidepressants". The increased use of selective serotonin reuptake inhibitors and other nontricyclic antidepressants is probably related to their better tolerability, an improved risk-to-benefit ratio and lower toxicity in case of overdosage. The proportion of different antidepressants classes also surprises: during studied six years the proportion of SSRIs remained almost the same, while the proportion of newer “other” antidepressants grew up almost two times. Over the study period, the

**DISCUSSION**

![Fig. 3. Total depression diagnoses by gender in Lithuania, 2004–2009](image1)

![Fig. 4. First-time and relapsed depression diagnoses by gender in Lithuania, 2004–2009](image2)
The increasing consumption of antidepressants and the growing numbers of depression diagnoses induce the necessity of a deeper analysis of the causes of this disease – physiological, psychological, social ones. Results of a comparison of the first-time and relapsed depression diagnoses are surprising: the level of first-time depression diagnoses remains almost the same, whereas relapsed depression numbers grow up significantly in all years of the study. The results of our study show that the number of depression diagnoses increases because of depression relapse in women.

Additional studies should be carried out in order to assess the true economic burden of depression treatment and especially the impact of its relapse on society.

Received 07 February 2011 Accepted 28 February 2011

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DEPRESIJOS DIAGNOZAVIMO IR ANTIDEPResanTų SUVARTOJIMO TENDENCIJOS LIETUVOJE 2004–2009 M.

Santrauka

Pagrindas. Viename iš penkių depresija sirgusių žmonių po pirmojo ligos epizodo visiškai nepasveiksta, o 70–80 % remisiją pasiektų žmonių depresija pasikartoja. Šio darbo tikslas buvo įvertinti antidepresantų suvartojimą per šešerius metus Lietuvoje (2004–2009), išanalizuoti depresijos diagnozavimo tendencijas ir jų atitikimą antidepresantų suvartojimui, kad ateityje būtų galima numatyti medicaminio depresijos gydymo kaštą pagal depresijos pacientų ir ligų skaičių.

Medžiaga ir metodai. Bendri antidepresantų pardavimo duomenys Lietuvoje buvo gauti iš IMS (Intercontinental Marketing Service) „Health Incorporated“ ir suskaičiuoti remiantis DDD (Defined Daily Dose) metodologija: gauta išraiška – DDD 1 000 gyventojų per dieną. Iš Valstybinio psichikos sveikatos centro gautų duomenų apie depresijos diagnozės iššūkis bendras diagnozų skaičius, taip pat jos susisiekstos pagal depresijos tipą ir lytį.

Rezultatai. Bendras antidepresantų suvartojimas padidėjo nuo 10,17 DDD / 1000 gyventojų per dieną (2004) iki 15,10 DDD / 1000 gyventojų per dieną (2009). Bendras depresijos diagnozų skaičius išaugo 12 %. Pirmą kartą diagnozuojamos depresijos skaičius padidėjo nedaug, tuo tarpu pasikartojančios depresijos diagnozų skaičius išaugo 27 %. 2009 m. moterims depresija buvo diagnozuota 4,5 kartų dažniau nei vyrams. Be to, tiriamuoju laikotarpiu depresijos pasikartojimų skaičius moterų grupėje išaugo 33 %.

Išvados. Tiesioginę antidepresantų suvartojimo padėjimo socioekonominę reikšmę, taip pat jos susisiekstos pagal depresijos tipą ir lytį.

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Raktai: antidepresantų suvartojimas, depresijos pasikartojimas, farmakoekonomika