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Source / Izvornik: *Collegium Antropologicum*, 2008, 32, 211 - 213

Journal article, Published version

Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:105:222490>

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Download date / Datum preuzimanja: **2025-01-14**



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# Dynamic in Prescribing Antipsychotic Drugs during Five Year Period (2001–2005) in the Psychiatric Hospital »Vrapče«, Zagreb, Croatia

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## ABSTRACT

*Aim of this study was to determine changes in prescribing antipsychotics during 5 year period in Psychiatric Hospital Vrapče. Data about type of antipsychotic medication, ward and gender were collected for all patients receiving antipsychotics on 1<sup>st</sup> of October. During 5 year period decrease in prescribing classical antipsychotics was observed while prescribing of atypical antipsychotics has shown increase. There was an increase in number of patients treated with combination of antipsychotics, while number of patients treated with clozapine remained the same. It was noticed that female patients were more often treated with atypical antipsychotics. Data for forensic and emergency ward was analyzed separately and trends similar to hospitals were noticed here. Rationalizing use of antipsychotics can decrease cost of treatment, decrease negative effects of antipsychotics and consequently improve the treatment. Through systematic studies of this type positive progress and changes in the prescribing of antipsychotics are possible.*

**Key words:** antipsychotics, hospital, psychotic disorders, prescription

## Introduction

Due to the large number of antipsychotic drugs available, psychiatrists have been burdened with multiple questions, such as: which antipsychotic drug is more efficient in treating psychotic disorders; do they differ in their mode of action; which are less toxic; do they differ in the efficacy with which they treat individual symptom of a disorder; are they effective in long-term treatment; and finally what are the true advantages and disadvantages of antipsychotic therapy<sup>1,2</sup>.

Researches had resulted in the discovery of a new generation of antipsychotic drugs, called atypical antipsychotic, which are said to be multipotent in their functioning. Along with their primary mode of functioning through reducing positive symptoms and psychomotor agitation the new generation of antipsychotics has shown true progress in the treatment of psychotic disorders. They have shown to cause significantly less extrapyramidal side effects and improve functioning of patients because of their beneficial effect on negative symptoms and cognitive functioning<sup>3,4</sup>. Considering the characteristics

of new generation antipsychotics, these antipsychotics are used more and more often and are pushing out of use classical antipsychotics. With the emergence of new antipsychotics idea that they are sufficient in treating psychotic disorders has been largely accepted. In the past few years algorithms and guidelines in the treatment of mental disorders emphasize and recommend monotherapy. This often leads to question, whether their is still a place for classical antipsychotics and do their use today represent psychiatrist's lack of knowledge and motivation in adopting new trends in the process of treating patients with psychotic disorders.

Since atypical antipsychotics are considerably more expensive than classical antipsychotics Croatian Bureau for Health Insurance has made decisions which in a way limit use of atypical antipsychotics.

Observing and analyzing the prescription of drugs in hospitals is important because specialists prescribe pharmacotherapy in hospitals, specialized teams and administering of medication is well controlled<sup>5,6</sup>. Medication

**TABLE 1**  
PORTION OF PATIENTS ON INDIVIDUAL ANTIPSYCHOTICS

Year	2001	2002	2003	2004	2005
Total	264	358	303	414	257
Classical	138 (52%)	190 (53%)	148 (49%)	228 (55%)	91 (35%)
Atypical	35 (13%)	39 (11%)	35 (12%)	56 (14%)	38 (15%)
Combination	64 (24%)	91 (25%)	94 (31%)	92 (22%)	100 (39%)
Clozapine	28 (11%)	38 (11%)	23 (8%)	38 (9%)	28 (11%)

prescribed by primary care physicians is in most cases recommended by specialists. All of this, along with the practice of written consultations, education of primary care physicians, publications and other means of information about medications leads to the trend of certain drugs being prescribed outside of hospitals. In this way hospitals create an informal sort of national strategy for prescribing medications. Due to all this it is clear that the use of medications in hospitals should be systematically observed.

The aim of this study was to analyze dynamic of prescribing new generation of antipsychotic medication during a five-year period in the Psychiatric hospital Vrapče Zagreb. Along with observing trends in the prescribing antipsychotic drugs, our specific goal was to establish whether there is a difference in the prescribing in regard to specifics of individual wards within the hospital and according to the gender of patients.

## Material and Methods

A cross study was performed in the Psychiatric hospital Vrapče in a way that on the 1st of October every year during the period 2001–2005, all patients being given antipsychotic drugs were registered. Data about type of antipsychotic medication, patient gender and hospital ward were collected. Patients on the following hospital wards were included in analysis: male ward for integral psychiatry; female ward for integral psychiatry; emergency psychiatry and intensive care ward; forensic psychiatry ward. During last two years of the study data from newly formed ward for first psychotic episodes was also included. During the year 2001 a total of 264 patients were being treated with antipsychotics, 358 pa-

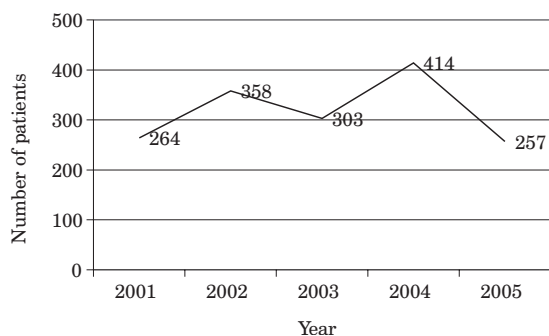


Fig. 1. Number of patients on antipsychotic medication.

tients during 2002, 303 patients during 2003, 414 patients during 2004 and 257 patients during 2005 (Figure 1).

Patients were divided into four groups: patients who were receiving typical antipsychotics (N=795, 50%), patients receiving atypical antipsychotics (N=203, 12%), patients receiving clozapine (N=155, 10%) and those receiving combination of antipsychotics (N=441, 28%) (Table 1).

Standard descriptive statistical methods were used to describe characteristics of the study sample.

## Results

The total number of patients receiving antipsychotic drugs did not change during the five-year period. In reference to the total number of prescribed antipsychotics, during observed period, it was evident that the percentage of patients being prescribed classic antipsychotics was decreasing from 52% in 2001 to 35% in 2005 while at the same time the percentage of patients being prescribed atypical antipsychotics and clozapine alone did not change. A discernible increase in the percentage of patients being prescribed a combination of classic and atypical antipsychotics was observed. Under this data in fact lies an enormous enlargement in usage of atypical antipsychotics in our sample.

From analysis of the distribution in the prescribing medication on the male and female wards it was observed that larger percentage of female patients were treated with atypical antipsychotics in comparison to male patients (Figure 2).

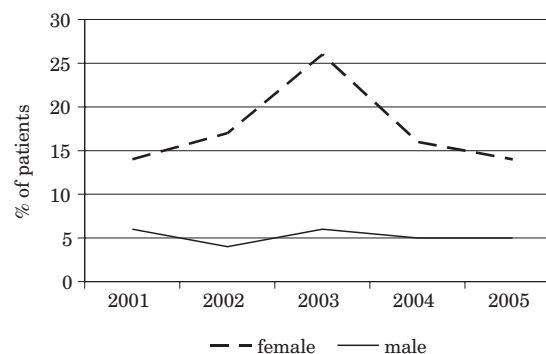


Fig. 2. Comparison between in prescribing atypical antipsychotics regarding to gender.

At the emergency psychiatric ward usage of classical and combination of antipsychotics was more frequent compared to the rest of hospital. Possibility of intramuscular application of typical antipsychotics is very important factor contributing for more often usage of typical antipsychotics in agitated and aggressive patients treated at this ward.

## Discussion and Conclusion

What was surprising, but only at first glance, was that during the studied five-year period, there was an increase in the prescribing of a combination of classical and atypical antipsychotics. There are several possible explanations for this finding: there is a »switching« period during which typical antipsychotics are tapered down and atypicals are tapering up. Second, in obstinate clinical cases, combinations of drugs are used when one antipsychotic does not suffice in bringing satisfactory therapeutic results. In our opinion use of a combination of antipsychotics in such situations is justified, even desired. This is especially case in hospital conditions since it is assumed that patients who are in need of hospital treatment are suffering from severe symptoms of their

illness. At the end we should not put aside an enormous experience and confidence that psychiatrists have towards »good, old classical« antipsychotics.

It is known that male patients more often develop extrapyramidal side effects. Our finding that female patients are more often treated with atypical, less sedating medication may be due to necessity of sedation with classical antipsychotics for male patients.

Since large amounts of medications, in our sample antipsychotics, are prescribed in hospitals it is important to analyze trends and changes of prescribing different medication. Although there are many guidelines and algorithms for treatment of psychotic patients clinical practice seems to be quite opposite. Comparisons between recommendations and everyday practice can be drawn from analysis like this.

Rationalizing use of antipsychotics can decrease the cost of treatment; it can decrease negative effects of antipsychotics and consequently improve the treatment of patients. Through systematic studies of this type positive progress and changes in the prescribing of antipsychotics are possible.

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## DINAMIKA PROPISIVANJA ANTIPSIHOTIKA U PSIHIJATRIJSKOJ BOLNICI »VRAPČE« TIJEKOM PET GODINA (2001–2005)

### SAŽETAK

Cilj ovog istraživanja bio je utvrditi promjene u propisivanju antipsihotika tijekom petogodišnjeg perioda (2001–2005) u Psihijatrijskoj bolnici Vrapče. Podaci o vrsti antipsihotika, odjelu te spolu za sve bolesnike koji su primali antipsihotike prikupljeni su jednom godišnje, 1. listopada. Tijekom petogodišnjeg razdoblja zamijećen je pad propisivanja klasičnih antipsihotika uz porast propisivanja atipičnih antipsihotika. Značajno je porastao broj bolesnika liječenih kombinacijom antipsihotika, dok je broj bolesnika liječenih klozapinom ostao nepromijenjen. Zamijećeno je kako su ženske bolesnice češće liječene atipičnim antipsihoticima. Posebno je analizirano propisivanje antipsihotika na odjelu forenzičke i urgentne psihijatrije gdje je uočen trend sličan bolničkom. Racionalizacija primjene antipsihotika može dovesti do smanjenja troškova liječenja, smanjiti negativne učinke antipsihotika i u konačnici poboljšati liječenje bolesnika. Kroz sustavne studije ovakvog tipa moguće su pozitivne promjene u propisivanju antipsihotika.