Changes in Drug Prescription Patterns in Schizophrenia in Five Years

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ÖZET:
Şizofrenide ilaç reçeteleme eğilimindeki değişiklikler

Amaç: 1999 ve 2004 yıllarında şizofreni tanısı ile izlenen yatan hastalarda ilaç reçeteleme eğilimlerindeki değişikliklerin geriye dönük olarak incelenmesi amaçlanmıştır.
Yöntem: 1999 ve 2004 yıllarında erişkin psikiyatri kliniğinde yatırılarak takip edilen toplam 1218 hastanın verileri geriye dönük olarak incelenmiştir. 1999 yılı için 138 ve 2004 yılı için 160 olmak üzere DSM-IV kriterlerine göre şizofreni tanısı alan toplamda 298 hasta çalışma grubunu oluşturmuştur. Hastaların demografik ve tıbbi bilgileri ve reçetelenen antipsikotikler gözden geçirilmiştir. İstatistiksel analiz için ki kare ve t - testleri kullanılmıştır.
Bulgular: Bulgularımız 1999'da tipik antipsikotik reçeteleme oranı %53.6 iken 2004'te bu oranın %34.4'e düştüğünü; atipik antipsikotik reçeteleme oranının ise 1999–2004 yılları karşılaştırıldığında %43.5'den %54.4'e çıktığını göstermiştir. İki dönem karşılaştırıldığında kombine antipsikotik reçeteleme oranı %11.6'dan %20'ye çıkarken antikolinerjik reçeteleme oranı %53.3'ten %24.4'e düşmüştür.
Tartışma: Bu çalışmanın bulguları şizofreni tedavisinde atipik antipsikotiklerin tipik antipsikotiklerin yerini aldığını gösteren çalışmaların sonuçlarını destekler niteliktedir. Kombine tedavi oranlarının artması ve iyi ilaç uyumunun kullanılan antipsikotik türü ile ilişkili bulunmamış olması ilgi çekicidir.

Anahtar sözcükler: İlaç reçeteleme eğilimleri, şizofreni, antipsikotikler

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ABSTRACT:
Changes in drug prescription patterns in schizophrenia in five years

Objective: The aim of this retrospective study is to investigate changes in the prescription patterns for inpatients diagnosed with schizophrenia in 1999 and 2004.
Method: A total of 1218 inpatient admissions to a general hospital adult psychiatry unit in 1999 and 2004 were examined retrospectively. Total 298 patients (138 in 1999 and 160 in 2004) were diagnosed with schizophrenia according to the criteria of DSM-IV. Demographics and medical data of the patients and the prescribed antipsychotics were reviewed. Chi-square and t-tests were used for statistical analysis.
Results: Data showed that typical antipsychotic prescription rate decreased from 53.6% in 1999 to 34.4% in 2004, while the atypical antipsychotic prescription rate increased from 43.5% in 1999 to 54.4% in 2004. Also combined antipsychotic prescription rate (polypharmacy) increased from 11.6% in 1999 to 20% in 2004 and anticholinergic prescription rate decreased from 53.3% in 1999 to 24.4% in 2004.
Discussion: The findings of this study confirm the results of previous studies that atypical antipsychotics appear to be displacing typical antipsychotics in the treatment of schizophrenia. It is interesting that antipsychotic combination therapy rates have almost doubled within the period studied and no correlation was found between good drug adherence and the type of antipsychotic used.

Key words: Prescription patterns, schizophrenia, antipsychotics

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INTRODUCTION

Since 1989, second generation of antipsychotic drugs, atypical antipsychotics, have become available. These drugs have shown their superiority over typical antipsychotics since they are as effective against positive symptoms as typical antipsychotics and more effective against negative symptoms. In addition, they have reduced the risk of side effects such as tardive dyskinesia. However some of them have the risk of inducing agranulocytosis and diabetes (1).

New generation antipsychotics have been accepted into common use around the world (1-4) but studies designed to assess the utilization of atypical antipsychotics around the world show different trends of drug prescription patterns (5). In the USA, atypical antipsychotic use seems to be continuously increasing, while conventional antipsychotic use decreasing (6-10). Studies from Europe show similar results to the USA. Santamaria et al (11) reported that antipsychotic agent consumption in Spain increased almost fourfold

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showing a notable drift from classical antipsychotics to atypical antipsychotics over the period 1985-2000. Studies from Italy found increased atypical antipsychotic consumption while total antipsychotic use remained stable (12,13). Significant increase of total utilization of antipsychotic drugs mainly on the account of atypical antipsychotics was reported from Serbia and Montenegro (14). Another study analyzing data from Australia showed that the relative prescribing rate of atypical antipsychotics for schizophrenia and other psychoses in general practice nearly doubled over a four year period while the prescription rate of typical antipsychotics had decreased (15). This study strengthens the results of the latter studies regarding the increase in atypical antipsychotic use (16). Chong reported that 1% of 534 inpatients with chronic schizophrenia were prescribed an atypical antipsychotic while 59% of patients were taking two or more antipsychotics. (17).

Studies from Turkey reported that atypical antipsychotics were prescribed commonly (18,19). However, to our knowledge, there is no study on the trends of prescription patterns for inpatients with schizophrenia in Turkey. Therefore we conducted this retrospective study to investigate changes in the prescription patterns for inpatients diagnosed with schizophrenia between 1999 and 2004.

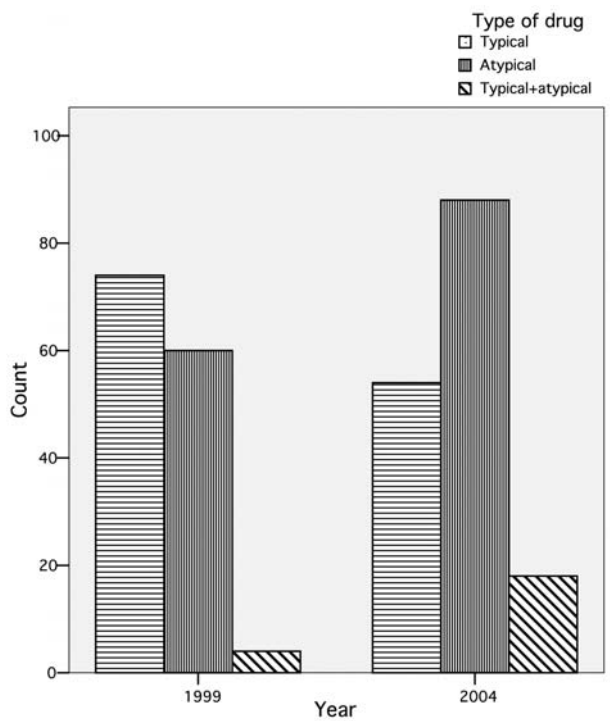

Figure 1: Prescription change rates across years

METHOD

A total of 1218 inpatient admissions to a general hospital adult psychiatry unit in 1999 and 2004 were examined retrospectively. All patients gave written informed consent for the scientific use of their data obtained at admission to hospital. The study population comprised 298 patients (138 in 1999 and 160 in 2004) diagnosed with schizophrenia according to the criteria of DSM-IV. The patients were diagnosed at grand rounds by at least three psychiatrists and the psychiatrists working in the unit have not changed within 5 years. The grand rounds were made routinely twice a week with the attendance of psychiatrists, residents and other mental health workers. Demographics and medical data of the patients and the prescribed antipsychotics were reviewed and recorded on a standard form. Chi-square and t-tests were used for statistical analysis.

RESULTS

The study population consisted of adolescents and adults aged 14–67 years with a mean age of 35.7 (SD: 10.8) years. The group included 170 male patients (57% of population) with a mean age of 36 (SD:10.0) years and 128 female patients (43% of population) with a mean age of 35.4 (SD:11.7) years. There were no differences between 1999 and 2004 about the patients' distribution according to age, sex, marital status or socioeconomic status. The mean duration of illness was 4.8 years in 1999 and 4.9 years in 2004 and was not statistically different. There were no differences in recurrent hospitalizations between two periods but the mean hospitalization time had decreased slightly. In 1999 the mean hospitalization time was 18.1 days while it decreased to 16.1 days in 2004, but the difference was not statistically significant.

Findings from data showed that in 1999 typical antipsychotics were prescribed to 53.6% of patients and atypical antipsychotics were prescribed to 43.5% of the patients while 2.9% of the patients were treated with both. In 2004 typical antipsychotics were

prescribed to 34.4% of patients and atypical antipsychotics were prescribed to 54.4% of the patients while 11.3% of the patients were treated with a combination of typical and atypical antipsychotics. The atypical antipsychotic prescription rate increased from 43.5% to 54.4% (Chi-square:3.93, df:1, p≤0.05) while the typical antipsychotic prescription rates decreased from 53.6% to 34.4% from 1999 to 2004 (Chi-square:11.2, df:1, p≤0.01). Use of multiple antipsychotic rate increased from 11.6% to 20% within the same time period (Chi-square:3.87, df:1, p≤0.05) (Graph I).

Anticholinergic medications were prescribed to 53.3% of patients in 1999 and to 24.4% of patients in 2004. Anticholinergic prescription was statistically correlated to the type of antipsychotic prescribed. (Chi-square: 39.5, df:2, p≤0.01) Anticholinergic medication prescription rates decreased from 53.3% to 24.4% (Chi-square:26.2, df:1, p≤0.01). In 1999, 43.8% of patients reported good compliance to drugs while 56.3% of patients reported good compliance with their drugs in 2004. Reported good compliance was not found to be statistically correlated with the type of antipsychotic prescribed.

When we evaluated the patients' profiles and the type of antipsychotics prescribed we saw that the mean age of patients prescribed typical antipsychotics was 38.6 years while the mean age of patients prescribed atypical antipsychotics were 33.6 (t:3.9, df:274, P≤0.01). The duration of illness in patients using typical antipsychotics was 5.1 years. This was significantly longer than the duration of illness in patients on atypicals which was 4.7 years. (t:3.09, df:272, P≤0.01). The mean years of education received were 7.5 years for typical and 8.4 years for atypical antipsychotic group but it was not statistically significant (p>0.05). The type of antipsychotics prescribed were not found to be correlated with sex, comorbid medical conditions, recurrent hospitalizations, patient's status (voluntary vs. involuntary), long acting depot antipsychotics, or previous electroconvulsive therapy (ECT).

DISCUSSION

Previous studies mostly reported that prescribing practices changed by years and the proportion of patients prescribed atypical drugs increased substantially (6-11,14,16). Our study results confirmed the results of previous studies that newer antipsychotic medications appear to be displacing traditional medications and are associated with less prescribing of regular anticholinergic medications in schizophrenic inpatients (20,21). In this study the factors found to be related with the type of antipsychotics prescribed were age and the duration of illness. The patients prescribed typical antipsychotics were significantly older than the patients prescribed atypical antipsychotics. Moreover the duration of illness in patients prescribed typical antipsychotics was significantly longer than the duration of illness in patients prescribed atypical antipsychotics. Similar patient characteristics were reported for prescription of typical antipsychotics in the literature (22).

Although monotherapy is recognized as the preferred mode of treatment for the patients with schizophrenia and antipsychotic polypharmacy is not recommended except in the case of switching from one antipsychotic to another for limited time periods and in treatment resistance, our study results showed that combination therapy rate increased from 1999 to 2004. Poor response of psychotic symptoms to a single antipsychotic drug has been cited as a common reason for polypharmacy. Generally, the concurrent use of more than one antipsychotic was reported to vary from 10% to 60%, depending on the population studied, the study method, the place of treatment site, and the duration of the study period (23-27). The combined antipsychotic therapy rate in our study increased from 11.6% to 20% within five years period. Although it is still within the limits reported in the literature before, the increase seems interesting. The choice of combination therapy was not found to be related with patients' present medical and demographic data. On the other hand, our study data did not include the rate of treatment-resistant patients which is one of the limitations of our study. Treatment resistance rate was reported to vary from 10-30% in patients with schizophrenia and an additional 30-50% was reported to be partially resistant to treatment in the literature (28-30). Whether treatment resistance or other patient-related or staff-related factors affect the combination therapy rate needs to be clarified by

further studies.

In 1999, 43.8% of patients reported good compliance to their drugs while this rate was 56.3% in 2004. Previous studies reported different results about compliance and type of antipsychotic used (6,31). Considering with the literature good compliance to the atypical antipsychotics may be explained with good side effect profile. But we found that reported good compliance was not correlated to the type of antipsychotic used.

In conclusion, our study results confirm the results of previous studies regarding the increase in atypical antipsychotic prescription and the decrease in typical antipsychotic and concomitant anticholinergic drug prescriptions. It is interesting that antipsychotic combination therapy rates increased within the period studied and that increased good compliance was not found to be related with the type of antipsychotic used as commonly suggested in the literature. Considering that prescription patterns of atypical antipsychotics may differ from country to country, findings of this study contribute to the existing literature by reflecting the prescription patterns for inpatients with schizophrenia in Turkey.

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