

Impact of Follow-Up by the Child and Adolescent Psychiatrist on Emergency Department Re-Visit due to Child-Adolescent Psychiatric Causes

Çocuk Psikiyatristi Takibinde Olmanın Çocuk-Ergen Psikiyatrik Nedenlerle Acil Servis Tekrar Başvurusu Üzerine Olan Etkisi

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ABSTRACT

Objective: Psychiatric causes of emergency department (ED) visits in childhood have been increasing more rapidly than the other causes. The rate of re-visit to the ED due to the same complaint is an important reason for ED visits. In the present study, we investigated the impact of follow-up of child-adolescent patients presenting to the ED due to psychiatric causes by the child and adolescent psychiatrist on ED re-visits due to the same complaint.

Methods: This retrospective single-center study was conducted on child-adolescent patients admitted to the ED for psychiatric reasons in the last 2 years. A total of 77 patients were included in the study. The patients were divided into two groups according to whether they were followed up by the child and adolescent psychiatrist. The first group included patients who were followed up by the child and adolescent psychiatrist, whereas the second group included patients who were not seen or not followed up by the child and adolescent psychiatrist.

Results: Child-adolescent patients in the first group who visited the ED due to psychiatric causes and were followed up by the child and adolescent psychiatrist had a significantly lower rate of ED re-visit due to the same complaint than those in the second group of who were not seen or followed up by the child and adolescent psychiatrist ($p=0.023$).

Conclusion: Follow-up by child and adolescent psychiatrist plays an important role in decreasing the ED re-visit rate of child-adolescent patients presenting to the ED due to psychiatric reasons.

Keywords: Child and adolescent psychiatrist, emergency department, re-visit

ÖZ

Amaç: Çocukluk çağı acil başvuruları arasında psikiyatrik nedenler diğer nedenlere göre daha hızlı oranda artmaktadır. Acil servise aynı şikayetle tekrar başvuru oranı acil başvurularının önemli bir nedenidir. Biz de bu çalışmayla psikiyatrik nedenlerle acil servise başvuran çocuk-ergen hastaların çocuk psikiyatristi takibine girilmesi durumunda aynı şikayetle tekrar acil başvurusu üzerine olan etkisini inceledik.

Yöntemler: Retrospektif olarak analiz edilen bu çalışma, tek merkezli olup son 2 yılda acil servise psikiyatrik nedenlerle başvuran çocuk-ergen hastaları içermektedir. Çalışmaya 77 hasta dahil edildi. Bu hastalar çocuk psikiyatristi takibine göre iki gruba ayrıldı. Çocuk psikiyatristinin takibine giren hastalar birinci gruba, çocuk psikiyatristinin görmediği veya takibine girmedikleri hastalar ikinci grubu oluşturdu.

Bulgular: Psikiyatrik nedenlerle acil servise başvuran çocuk-ergen hastalardan çocuk psikiyatristinin takibine girdiği çalışmanın birinci grubunu oluşturan hastalar, çalışmanın ikinci grubuna giren çocuk psikiyatristinin görmediği veya takibine almadığı hastalara göre anlamlı bir şekilde daha az oranda acil servise aynı şikayetle tekrar başvurdıkları tespit edildi ($p=0,023$)

Sonuç: Çocuk psikiyatristi takibinin, psikiyatrik nedenlerle acil servise başvuran çocuk-ergen hastaların acil servis tekrar başvuru oranının azaltılmasında önemli bir katkısı olmaktadır.

Anahtar Kelimeler: Acil Servis, çocuk ve ergen psikiyatristi, tekrar başvuru

Introduction

Psychiatric causes are among the most common reasons for child emergency department (ED) visits (1). Since treatment of this patient group takes a long time, follow-up of these patients by the child and adolescent psychiatrist is important to prevent the recurrence of psychiatric episodes (2). Otherwise, these patients present to the ED due to the same complaint (3). ED re-visit due to the same complaint is considered as one of the reasons for ED overcrowding (4). Therefore, in this retrospective study, we investigated the impact of follow-up of child and adolescent patients by the child and adolescent psychiatrist on ED re-visit due to the same complaint.

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Methods

The present study was conducted retrospectively and covered the last 2 years. On average, 47,000 child patients present to the ED of our hospital annually. The files of 2743 patients who presented to the child and adolescent psychiatrist in the last 2 years were analyzed, and those who visited the ED due to psychiatric reasons in the last 2 years were recorded. The

Table 1. Reasons for emergency admission of patients included in the study

	% (n=77)
Whole body convulsion or numbness	45.5 (35)
Suicide attempt	27.3 (21)
Drug overdose	57.1 (12)
Injury by a sharp object	38.0 (8)
Hanging	4.7 (1)
Palpitation	9.1 (7)
Harming others	5.2 (4)
Meaningless speech, audiovisual hallucinations	3.9 (3)
Abdominal pain	3.9 (3)
Headache	2.6 (2)
Dizziness	2.6 (2)

Table 2. Rate of emergency readmission of the study groups

	First group (n=39) % (n)	Second group (n=38) % (n)
Patients re-visiting the emergency department	2.6 (1)	18.4 (7)
Patients not re-visiting the emergency department	97.4 (38)	81.6 (31)

Table 3. Diagnoses established by the child and adolescent psychiatrist

	% (n=39)
Conversion disorder	17.9 (7)
Major depressive disorder	15.3 (6)
Panic disorder	15.3 (6)
Behavioral disorder	12.8 (5)
Acute stress disorder	12.8 (5)
Somatization disorder	10.2 (4)
Dissociative disorder	5.1 (2)
Bipolar disorder	5.1 (2)
Psychotic disorder	2.5 (1)
Schizophrenia	2.5 (1)

files in the archive of the Child and Adolescent Psychiatry Polyclinic were analyzed to determine if those patients were followed up by the child and adolescent psychiatrist. Children who had comorbid mental retardation and an organic disease including primarily epilepsy were not included in the study.

Annually, an average of 47,000 children present to the ED of our hospital. The files of patients who were admitted to the ED between June 2014 and September 2016 for psychiatric causes were reviewed. In that period, 89 children and adolescents presented to the ED for psychiatric causes. Those children who had a chronic comorbidity, such as mental retardation and epilepsy and any organic disease, were not included in the study. Furthermore, patients whose files were missing were excluded from the study. After patients who did not meet the inclusion criteria and whose files were missing were excluded, the remaining 77 patients were included in the study. The archives of the child and adolescent psychiatrist and hospital automation system were checked to determine if these patients were followed up by a child psychiatrist.

Patients were divided into two groups. The first group consisted of child-adolescent patients who visited the ED for psychiatric reasons and then followed up by the child and adolescent psychiatrist. The second group included child-adolescent patients who visited the ED for psychiatric reasons but did not visit the Child and Adolescent Psychiatry Polyclinic and thus were not followed up by the child and adolescent psychiatrist.

The child and adolescent psychiatrist in Bitlis State Hospital is the only one in the province and also accommodates patients from neighboring districts. Authors declared that the research was conducted according to the principles of the World Medical Association Declaration of Helsinki "Ethical Principles for Medical Research Involving Human Subjects".

Statistical analysis

Statistical analysis of patient data was performed using the IBM Statistical Package for the Social Sciences 22.0 (IBM SPSS Corp., Armonk, NY, USA). Categorical data are expressed as percentage. Chi-square test was used for comparison of differences between the groups in terms of frequencies. A p value <0.05 was considered as statistically significant.

Results

Of the 77 patients included in the study, 71.4% (n=55) were girls, and 28.6% (n=22) were boys. The mean age of the patients was 14.8 ± 2.1 years; the youngest was 7 years, and the oldest was 17 years. The most common reasons for ED visits included syncope and/or whole body convulsion- numbness with 45.5% (n=35) and suicide attempt with 27.3% (n=21). The most common method for suicide attempt was in the form of drug overdose with 57.1% (n=12). Table 1 shows the other reasons for ED visits. Of the 77 patients included in the study, 39 were in the first group of patients who were followed up by the child and adolescent psychiatrist, and 38 were in the second group of patients who were not followed up by the child and adolescent psychiatrist. Of the patients, 2.6% (n=1) were in the first group,

and 18.45% (n=7) were in the second group who re-visited the ED due to psychiatric reasons (p=0.023) (Table 2).

As for the ED re-visits ratio due to psychiatric symptoms, the most common reason was suicide attempt with 19.0% (4 out of 21 patients). This was followed by palpitation with 14.2% (1 out of 7 patients) and syncope, whole body convulsion, or numbness with 8.5% (3 out of 35 patients).

An evaluation of the patients according to the reasons for ED visits revealed that all of the patients who presented due to psychotic symptoms, such as meaningless speech, audiovisual hallucinations, and somatic symptoms, such as abdominal pain, headache, and dizziness, were followed up by the child and adolescent psychiatrist. Of the patients, 71.4% (n=5) with complaint of palpitation, 42.8% (n=15) with complaint of syncope and/or whole body convulsion-numbness, and 23.8% (n=5) admitted due to suicide attempt were followed up by the child and adolescent psychiatrist.

The most common diagnostic categories of 39 patients who first visited the ED and then were followed up by the child and adolescent psychiatrist included conversion disorder with 17.9% (n=7), major depressive disorder with 15.3% (n=6), panic disorder with 15.3% (n=6), behavioral disorder with 12.8% (n=5), generalized anxiety disorder with 12.8% (n=5), and somatization disorder with 10.2% (n=4), respectively. Table 3 shows the other diagnostic categories of the patients. Major depressive disorder was the most common diagnosis established by the child and adolescent psychiatrist for children who attempted suicide. Furthermore, the most common reason for suicide attempt by these children and followed up by the child and adolescent psychiatrist was family-related problems with 22.1% (n=17), followed by friend relationships with 2.6% (n=2), school-related problems with 1.3% (n=2), and sexual abuse with 1.3% (n=2), respectively.

Discussion

Psychiatric causes account for 10%-15% of child-adolescent emergencies (5). Behavioral disorders, suicidal ideation or attempt, acute stress disorder, and causing harm to others are the most common reasons for visits of child and adolescent psychiatric patients to the ED (6).

There are several studies in the literature regarding child and adolescent patients who present to the EDs due to psychiatric complaints (7, 8). In our study, the most common reason for ED visit was found to be syncope and/or whole body convulsion-numbness. Suicide attempt was among the most common reasons for child-adolescent psychiatric patients to present to the EDs, which was consistent with the literature, whereas drug overdose was the most common method for suicide attempt (6). On the other hand, similar to another study, the most common diagnoses of patients followed up by the child and adolescent psychiatrist were found to be conversion disorder and major depressive disorder (8, 9). Contrary to a retrospective study conducted by Tanzer et al. (10) on pediatric forensic cases in which they concluded that road traffic accident is a preventable

factor, we only assessed children and adolescent patients who presented to the ED for psychiatric causes in our study.

Today, an increased ED visit is an important problem worldwide (11). Overcrowding of EDs leads to some important problems, such as delays in the treatment of patients and increased hospital mortality (12). Therefore, some studies focused on specific methods to decrease ED overcrowding by eliminating the factors causing overcrowding (13, 14). The rate of ED re-visit due to the same complaint is 1%-11% and one of the important reasons for ED overcrowding (15-17).

The rate of re-visit with the same complaint of patients who presented due to suicidal reasons and were intervened by a psychiatrist was lower than that of patients who were not followed up by a psychiatrist (18). Erlangsen et al. (19) obtained similar results in their short-term and long-term follow-up cohort study. In the present study on child-adolescent psychiatric patients, we found that the rate of ED re-visit with the same complaint of the first group of patients who were followed up by the child and adolescent psychiatrist was significantly lower than that of the second group of patients who were not followed up by the child and adolescent psychiatrist.

Of the patients, 20%-25% who presented to the ED due to suicide attempt have a second suicide attempt, and 5%-10% of them result in death according to previous studies (20). Mutlu et al. (21) conducted a study in which they emphasized the importance of a patient who was admitted to the ED due to suicide attempt. In their study on adolescents with behavioral disorders, they concluded that suicide attempt is an important factor to predict hospitalization. In our study, we found that child-adolescent patients who attempted suicide re-visited the ED due to the second suicide attempt at a similar rate. Patients who attempted suicide were followed up by the child and adolescent psychiatrist at a lower rate, whereas they had a higher rate of ED visits than the other reasons of ED visits.

Study limitations

The present study has some limitations. Poor socioeconomic and educational level of the local people, negative and prejudiced views about psychiatric treatment, reluctance of families for patient management, and cooperation and secondary results of ED visits are negative factors that increase the number of patients who are not followed up and the rate of ED re-visits. Our study was a retrospective study and included a low number of patients.

Conclusion

Child-adolescent psychiatric patients constitute one of the most challenging patient groups that are difficult to manage at the ED (22). In addition, it was demonstrated by our study that the rate of re-visit of these patients due to the same complaint increased unless they were followed up by the child and adolescent psychiatrist. Therefore, specific measures should be taken, and efforts should be undertaken in order to ensure that child-adolescent psychiatric patients are followed up by the child-adolescent psychiatrists.

Ethics Committee Approval: Authors declared that the research was conducted according to the principles of the World Medical Association Declaration of Helsinki “Ethical Principles for Medical Research Involving Human Subjects”, (amended in October 2013).

Informed Consent: Due to the retrospective design of the study, informed consent was not taken.

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