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Diagnostic Category and Disposition Decisions in Patients Referring to Psychiatric Emergency Yard of Golestan Hospital in Ahvaz: An Epidemiologic Study

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The present study aimed to evaluate the diagnostic category and disposition decisions in patients referring to psychiatric emergency from an epidemiologic point of view. This was a descriptive/analytic cross-sectional study carried out on 399 patients referring to psychiatric emergency of Golestan Hospital in Ahvaz, Iran, 2014. Demographic data and data regarding source of referral, diagnosis and final disposition decision were recorded. The data were analyzed through descriptive statistics and chi-square test. Statistical analysis were carried out using SPSS version 16. Twenty percent of patients were diagnosed with medical disorders, 76% of patients received diagnosis of psychiatric disorders and 15 patients (4%) didn't receive any identified diagnosis. Forty six percent of patients discharged, 24% of them referred and 30% of them hospitalized. Among the patients with psychiatric diagnoses, 30.39% have psychotic disorders, 26.47% have major depression disorder, 21.56% diagnosed bipolar disorder, 6.86% have substance related disorders and finally 3.92% of patients received diagnosis of post-traumatic stress disorder. Diagnoses of remaining ones were not known. The results showed that there was relationship between diagnostic category and disposition of the patients (χ^2 = 27.4, df = 6, p<0.001). There was a reasonable relationship between diagnostic category and final disposition decisions; therefore performance of Golestan Hospital has been appropriate.

Key words: Psychiatric emergency, diagnostic category, disposition

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INTRODUCTION

In the recent decades, significant investments have been done on health improvement in developing countries. Human resources and facilities of hospitals have received more attention during last several years (Asefzadeh, 2005). Hospitals as the greatest health care provider centers, receive a main portion of resources and funds that have been allocated to the health care system of the country (Karimi, 2004a). Hospitals must respond to the growing number of patients to receive satisfactory services in one hand and they are faced with limited resources and budget on the other hand (Karimi, 2004b). Therefore, it is necessary to assess the hospital performance (the hospital activity as well as the use of hospital resources such as equipment and human resources) in the health improvement process (Duma and Munteanu, 2002). Emergency department is one of the most important yards in hospital because of high referral rates to this yard, time urgency and importance of the quality of service being provided to the patients. Therefore, it makes the emergency department considered as the symbol of general status of providing services in a hospital (Hasic and Sisic, 2000).

The importance of the emergency department is to extent that existence of emergency department in all general hospitals, compliance with minimum standards (structural, technological and human) is one of the main criteria for hospital assessment. A hospital is considered under the determined standard without it (Mirdehghani, 1998).

A part of the department's responsibilities is evaluating and treating patients with psychiatric emergencies (Unick *et al*., 2011). Psychiatric emergencies include every disturbances in thought, emotion or behavior that need to immediate therapeutic interventions. The demand for emergency psychiatric services is growing and conditions requiring emergency psychiatric services may include violence, murder, rape, attempted suicide, etc. (Sadock and Sadock, 2011). Psychiatric disorders are important issues in general health and need to assess carefully and in detail. Inability in patients with mental disorders is more than individuals with AIDS, cardiovascular disease and those who have accident. It shows the importance of prompt delivery of psychiatric emergency services (Pour *et al*., 2009).

In psychiatric emergency, it is important to differentiate timely the psychiatric symptoms secondary to general medical conditions from psychiatry disorders. If underlying medical conditions not detected, the psychiatric misdiagnoses would be the result. It has potential danger for the patient (Pour *et al*., 2009). The main question the emergency physician should answer is that the symptoms have medical or psychiatric root or a combination of both them. Medical conditions such as diabetes, thyroid disease, acute toxicity, AIDS and head injury can accompanied with changes in mental status and imitate psychiatric symptoms (Pour *et al*., 2009). Moreover, personality characteristics and psychological features in patients with some medical disorders e.g., multiple sclerosis indicate the relationship between body and mind and it is one of the challenges of delimitation of psychological problems in manifestation of physical symptoms (Pour *et al*., 2014).

On the other hand, correct diagnosis of categories of psychiatric disorders has an important role in determination of treatment plan and prognosis of the disorder and disposition of patient (i.e., whether the patient was admitted or discharged or transferred to another facility).

Therefore, it is important to differentiate psychiatric disorders from medical diseases and to diagnose categories of mental disorders.

The literature review in the present study didn't bring up a study, which has particularly evaluated the performance of emergency department in management of psychiatric patients. Douglass *et al*. (2011) investigated on agreement between emergency medicine and psychiatry on diagnosis and disposition of emergency department patients with behavioral emergencies. Way *et al*. (1998) study agreement among psychiatrists in psychiatric emergency assessments. Salman *et al*. (2014) have studied predictive factors of suicide attempt and non-suicidal self-harm in emergency department.

In Iran, Hashemi *et al*. (2013) studied the performance indexes of emergency department in Shohadaye Tajrish Hospital, Tehran, Iran before and after establishment of emergency medicine. Other studies such as Rahmani *et al*. (2006), Rahimi (2001), Movahednia *et al*. (2013), Tabibi *et al*. (2009) and Zohoor and Zadeh (2003) have evaluated the management and human resource aspects. The present study aimed to evaluate the diagnostic category and disposition decisions in patients referring to psychiatric emergency yard of Golestan Hospital in Ahvaz from an epidemiologic point of view.

Results of the present study could be effective for psychiatrists and emergency physicians to more precise clinical screening and more effective interventions and better outcomes.

MATERIALS AND METHODS

This is a descriptive-analytic study was carried out during the second 6 months of 2014. The sample consisted of 399 patients (165 males and 234 females) with a mean age of 34.43 years old (range = 14-72) who attended psychiatric emergency of Golestan Educational Hospital in Ahvaz, Iran.

All patients underwent complete history, psychiatric and neurological and physical examination, Complete Blood Count (CBC), liver and kidney tests (AST-ALT-BUN-Cr), blood clotting tests (PT-PTT-INR) and chest computed tomography (CT) scan. A checklist to obtain demographic data about gender, age, diagnosis, categories of psychiatric illness and final disposition decision was also completed.

Statistical analysis: Data were analyzed using descriptive statistics and chi-square test. The probability level of 0.05 was accepted as statistically significant. Statistical analyses were carried out using SPSS version 16.

RESULTS

Three hundred and ninety nine patients (165 women and 234 men) with the mean age of 34.43 years (age range: 14-72) had visited during the study period. Seventy eight patients (20%) diagnosed medical disorders, 306 patients (76%) received diagnosis of psychiatric disorders and 15 patients (4%) didn't receive any identified diagnosis. Frequencies of patients with different diagnosis are listed in Table 1.

Forty six percent of patients discharged, 24% of them referred to other health centers and 30% of them hospitalized. Table 2 summarizes the final outcome of the patients.

Among the patients with psychiatric diagnoses, 30.39% had psychotic disorders, 26.47% had major depression disorder, 21.56% diagnosed bipolar disorder, 6.86% had substance related disorders and finally 3.92% of patients received diagnosis of post-traumatic stress disorder. Diagnoses of remaining ones were not known (Table 3).

Table 1: Frequencies of patients with different diagnosis

Diagnosis	Frequency (%)
Medical disorder	78 (20%)
Psychiatric disorder	306 (76%)
Unknown	15 (4%)
Total	399 (100%)

Table 2: Outcome of the studied patients

Outcome	Frequency (%)
Hospitalized	120 (30%)
Discharged	183 (46%)
Referred	96 (24%)
Total	399 (100%)

Table 3: Different categories of psychiatric disorder in studied patients

Psychiatric diagnosis	No. (%)
Psychotic disorders	93 (30.39)
Bipolar disorder	66 (21.56)
PTSD	12 (3.92)
Major depression disorder	81 (26.47)
Substance related disorders	21 (6.86)
Unknown	33 (10.78)
Total	306 (100)

The results show that there is a significant relationship between the diagnosis which patient receive and result of the diagnosis ($\chi^2 = 27.4$, df = 6, $p<0.001$).

Many of patients (57.7%) with medical diagnosis but a few patients with psychiatric diagnosis (15.7%) referred to other health centers.

The results also indicated that, a few patients with medical diagnosis (11.5%) however, 36.3% of patients with psychiatric diagnosis hospitalized. Moreover, 80% of patient who didn't received any identified diagnosis were discharged that was high compared to patients with medical or psychiatric diagnosis. Table 4 shows the results of crosstabs for variables of patient's disposition and the type of diagnosis.

DISCUSSION

Based on the results, 20% of patients were diagnosed with medical disorders, 76% of them received diagnosis of psychiatric disorders and others didn't receive any identified diagnosis.

Among the patients with psychiatric diagnoses, 30.39% have psychotic disorders, 26.47% have major depression disorder, 21.56% diagnosed bipolar disorder, 6.86% have substance related disorders and finally 3.92% of patients received diagnosis of post-traumatic stress disorder. Diagnoses of remaining ones were not known.

The findings indicated that there is relationship between the type of medical or psychiatric diagnosis and the result of the diagnosis or patient's disposition. Most patients who received diagnosis of medical disorders were referred to other health centers. Higher proportion of patients with psychiatric diagnosis was admitted for psychiatric hospitalization and many of patients without identified diagnosis were discharged.

Patients who receive diagnosis of medical disorder may experience psychiatric symptoms because of their physical disease and referred to psychiatric emergency. In differential diagnosis of psychiatric disorders, it should be considered primarily any general medical disorder or taking prescription drugs, non-prescription medicines or contraband drugs.

Table 4: Comparison of disposition between patients with different diagnosis

	Disposition of patients			
Type of diagnosis	Hospitalized	Discharged	Referred	Total
Medical				
Frequency (%)	9 (11.5%)	24 (30.08%)	45 (57.7%)	78 (100%)
Expected frequency	23.4	35.7	18.9	78
Psychiatric				
Frequency (%)	111 (36.3%)	147 (48%)	48 (15.7%)	306 (100%)
Expected frequency	92.1	140.4	73.5	306
Unknown				
Frequency (%)	0	12 (80%)	3 (20%)	15 (100%)
Expected frequency	4.5	6.9	3.6	15
Total				
Frequency (%)	120 (30.1%)	183 (45.9%)	96 (24.1%)	399 (100%)
Expected frequency	120	183	96	399

In treatment of the psychiatric symptoms secondary to medical disorders, it should be considered the underlying medical conditions (Pour *et al*., 2009).

Therefore, these patients might be better served by referral to other physical health services. Moreover, it is probable that the patients with medical disorders experience the psychiatric disorders such as depression or anxiety, because the medical disease causes impairment in their functioning (Maddux and Winstead, 2008). In the present study, also the majority of the patients with underlying medical disease were referred to other health centers to receive appropriate interventions. On the other hand, the patients who have just psychological problems discharged or hospitalized. It shows the proper functioning of the psychiatric emergency of Golestan Hospital.

The main reasons for patients discharge from the hospital are patient's consent or low-intensity symptoms. Overall about 40% of patients who present to psychiatric emergency, need to be hospitalized (Sadock and Sadock, 2011). In the present study, about 36.3% of clients were admitted for psychiatric hospitalization. The most important reasons for psychiatric hospitalization include diagnostic purposes, stabilization of the medication treatment; provide protection to patients who have suicidal or homicidal thoughts, control of the inappropriate and disorganized behavior.

The results of the present study showed that there is relationship between psychiatric diagnosis and disposition of patients. Many of patients, who were diagnosed with bipolar disorder, hospitalized. Individuals who didn't receive any identified diagnosis were discharged. About 70% of patients with bipolar disorder are aggressive in mania phase, they may commit suicide or homicide (Pour *et al*., 2014) moreover, insight and judgment in these patients is poor so that they may violate the regulations related to social and occupational relationships and cause trouble for themselves and their families. Therefore, it is necessary to hospitalize these patients to do psychological and pharmacological interventions. On the other hand, discharging the patients with any identified diagnosis from hospital shows that their symptoms have been low-intensity and couldn't make the patients disabled to provide their basic needs. It may also due to the limitations of psychiatric emergency in human resources or facilities (Maddux and Winstead, 2008) therefore, the staffs have to discharge some of the patients. In the current study, the diagnosis of 10.78% of the patients with psychiatric disorder was unknown.

In the most cases, people with no identified psychiatric diagnosis may be in the first episode of psychosis or their psychosis is related to substance use (Bahrami *et al*., 2011). The symptoms also may be the result of a psychological trauma (Ali *et al*., 2010) or exposure to chronic stress (Morrison *et al*., 2003).

In the present study, the most common psychiatric diagnoses were mood disorders, psychotic disorders, substance abuse and anxiety disorders. Douglass *et al*. (2011) in line with this result, in a study to assess the rate of agreement between emergency physicians and psychiatric counselors, found that agreement between emergency physicians and psychiatrists was 67% for mood disorders, 82% for suicide, 82% for drug/alcohol abuse, 85% for psychosis. They found 67% agreement between emergency physicians and consulting psychiatrists in diagnoses and 76% of agreement between them in patient's final disposition. This finding suggests a substantial disagreement between emergency physicians and psychiatrists in management and disposition of the patients. This can be due to a lack of standard criteria in assessment, diagnosis and disposition decisions in psychiatric conditions. Therefore, it is necessary to study the diagnostic accuracy of psychiatric emergency team and to offer strategies to enhance the diagnostic and appropriate diagnostic consequences. Woodhouse (1995) stated that one of the criteria for adequacy of emergency department is avoiding unnecessary diagnosis and admission. But this issue could be the result of psychiatric emergency limitations in precise diagnosis of disorders.

CONCLUSION AND LIMITATION

According to the results of the present study, performance of psychiatric emergency of Golestan Hospital in differentiation of physical illness from psychiatric disease, differentiation of different categories of psychiatric disorders and management and disposition of emergency department patients with psychiatric complaints is in an appropriate level. Thirty one percent of patients remain without any diagnosis. It could show the strength of the emergency department as well as the limitations of this yard in precise diagnosis of the mental disorders.

The study was conducted at a single urban, educational hospital that serves a subset of the population, which means the findings should be generalized to other groups or community hospital with caution. We couldn't evaluate the accuracy of the assessments and final disposition decisions, as there was no criterion standard and no follow-up of patients. Psychiatrist's assessments and disposition decisions are not an acceptable criterion standard, since previous studies often have demonstrated disagreement among psychiatrists in assessment of patients in the emergency department. Another limitation was the small sample size.

SIGNIFICANCE STATEMENTS

One of the criteria for adequacy of emergency department is avoiding unnecessary diagnosis and admission. A part of the department's responsibilities is evaluating and treating patients with psychiatric emergencies. Correct diagnosis of categories of psychiatric disorders, has an important role in determination of treatment plan and disposition of the patient. The literature review in the present study didn't bring up a study, which has

particularly evaluated the performance of emergency department in management of psychiatric patients. The present study evaluated the diagnostic category and disposition decisions in patients referring to psychiatric emergency yard of Golestan Hospital in Ahvaz. Based on the results, performance of Golestan Hospital was appropriate. Appropriate diagnostic and disposition leads to better trust in physician.

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