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Demographic and Clinical Features Of Applications To The Emergency Service For Suicide Attempts

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Abstract

Introduction and Objectives: Parasuicide is an important health problem which frequently occupies our emergency services and shows the possibility of future suicides. The investigation of the epidemiological and clinical features of parasuicidal patients in our region will guide us in approaching these patients.

Method: Adult parasuicidal patients who were admitted to our emergency department in 45 months were examined according to their gender, the way they came from the inside/outside of Erzurum province, the suicide form, the application season and complaints for the patients who were intoxicated with medication. In the groups, the parameters which were found to be significant with x2, t test or Mann Whitney U test were examined by multivariate analysis.

Results: A total of 533 patients, 66.8 percent of whom were females, were more likely to have suicide attempts in married women and single men. Antidepressant intoxication is higher in females, while salicylate and alcohol intake is higher in males. Aggressive suicides are more common in males and non-aggressive suicides are more common in females. Patients referred from outside the province of Erzurum are usually patients with organophosphate poisoning and loss of consciousness. Suicidal attempt is most commonly seen in the spring. While the rate of attempted suicide was higher in spring with antidepressant drug; In the summer, the rate of attempting suicide by taking organophosphate is high.

Conclusion: There are significant differences in the parasuicidal patients admitted to our emergency department according to the grouping mentioned in the methods. These data will provide guidance for treatment planning and follow-up in ED.

Keywords: suicide attempt, turkey, overdose, intoxication, aggressive, suicide intent

Özet

Amaç: Parasuisid acil servislerimizi sıkça meşgul eden ve ileride gerçekleşecek suisid ihtimalini gösteren önemli bir sağlık sorunudur. Bölgemizdeki parasuisid hastalarının epidemiyolojik ve klinik özelliklerinin incelenmesi bize, bu hastalara yaklaşımda yol gösterecektir.

Gereç ve Yöntem: Acil servisimize 45 ayda gelen yetişkin parasuisid hastaları kesitsel olarak cinsiyetlerine, Erzurum il sınırı içi/dışından gelmelerine, intihar şekline, başvuru mevsimine ve ilaçla zehirlenen hastalar da şikayetlerine göre incelenmiştir. Gruplarda x2, t testi veya Mann Whitney U testi ile anlamlı görülen parametreler mutivarite analizle incelenmiştir.

Bulgular: Yüzde 66,8'i bayan olan toplam 533 hastanın incelenmesinde, evli kadınlarda ve bekâr erkeklerde intihar girişimlerinin daha fazla olduğu görülmüştür. Antidepresan ile zehirlenme bayanlarda, salisilat ve alkol alımı ise erkeklerde daha yüksektir. Agresif suisidler erkeklerde, agresif olmayan suisidler ise bayanlarda daha sık görülmektedir. Erzurum il dışından sevk edilen hastalar genellikle organofosfat zehirlenmesi olan hastalar ve şuur kaybı olan hastalardır. İntihar girişimi anlamlı olarak en sık ilkbaharda görülmektedir. İlkbaharda antidepresan ilaç alarak intihara teşebbüs oranı fazla iken; yazın organofosfat alarak intihar girişiminde bulunma oranı fazladır.

Sonuç: Acil servisimize başvuran parasuisid hastalarının metodlarda değinilen gruplandırmaya göre incelenmesinde önemli farklılıklar göze çarpmaktadır. Acil serviste tedavi ve takibin planlamasında bu veriler yol gösterici olacaktır.

Anahtar kelimeler: intihar girişimi, türkiye, doz aşımı, zehirlenme, agresif, intihar amacı

Introduction

Throughout the history of mankind, the suicidal attempt in all societies is not only a matter of concern to psychiatrists, but also has economic, cultural and social aspects[1,2].

World Health Organization defines suicide in two groups as commited suicide and attempted suicide. Commited suicides result in death according to definition of WHO[3-5]. Suicide attempts are all non-lethal voluntary attempts to destroy, harm, poison themselves[2]. Sociodemographic risk factors of suicide include male gender, unemployment, poverty, being single, divorced, widowed or separate living and puberty[6,7]. There are reports that the level of education is low in the groups showing suicide attempts[8,9].

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Depression in societies causes changes in suicide rates. Emile Durkheim, in his classic work which was published more than a century ago, is known to examine suicide in three ways based on the effect of social change and social integration levels[10]:

1- **Egoistic suicides:** It is defined as the suicide incident that occurs when social ties are loose and when the individual feels lonely, due to the lack of integration with the social environment of the individual.
2- **Benevolent (Altruistic) suicides:** Individual life is strictly regulated by customs, traditions and habits, and it means that they kill a person when the commandments (whether religious or political nature) of the community require it.
3- **Normless (Anomic) suicides:** It is described that the change in the structure of the society as causing the chaos by disrupting the living conditions and moral values of the individual. This is due to social instability, which leads to moral instability and loss of the norms we are familiar with.

In our country, commited suicides occurs in females between first 15-24 years and in males first 15-34 years of life according to Turkey Statistics Institute[11]. Rates of suicide are 3,5 times higher in males than females in all over the world. However, suicide attemptions are 4 times higher in females than males[12].

Education level is most important indicator amongst socio-economical level[13]. Risk factors are low socio-economical level, low education level, low income, and poor life conditions[14]. Rates of sucide are higher in unemployed individuals than employed ones. Suicide rates increase during economical crisis and in the period of higher unemployment rates and decreases during good economical state end war times, contrarily[15]. Behaviours of parents are directly linked to character, personality, psychopathology and orientation of the offspring[16-18].

Altough rates may vary in different countries, most preffered three methods of suicide are self-intoxicatin by drugs (analgesics, antibiotics, antidepressants, antihistamines and corrosive drusgs), self-hanging and shooting by gunshot[19].

One chooses easily recruitble substances for a painless death. Suicidal ones uses the materials most easy to reach to die, for instance drugs in urban, insectisides in rural areas.

Altough poisoning by accident is common in other countries, drug intake for suicide is more common in developed countries. Insectisides and organophosphates are becoming more problematical in developing countries[20,21]. Parasetamol is most common drug in England but alcohol and psychatric drugs are more common in Finland[20].

Alcohol usage is 2 times higher in males than females. Alcohol levels are 4,9 times higher in the cases of suicide by gunshot[22-24]. Both genders are more prone to sucide during months of may and june, additionaly another peak is seen in females during october[25].

Among the methods of suicide attempt in patients admitted to our hospital include drug intake, gunshot injuries, hang oneself, high jump, self-mutilation with a sharp object, jumping infront of a vehicle, self-burning, exposure to toxic substances and other methods. In this study; We aim to evaluate the patients who applied to our emergency department due to suicide attempt in terms of demographic characteristics (age, gender, race, religion, education, occupation, marital status, geographic factors), cost, the problem that caused suicide and the method used.

Material and Method

It was planned to include patients aged 16 years and over who were admitted to the Emergency Service of the Academic Emergency Department of Atatürk University Faculty of Medicine, between May 2008 and January 2012. Non-suicidal drug intoxications and accidental injuries and accidents were excluded from the study. During the first admission and follow-up, registration of medical interventions, consultations, follow-up and treatment clinics, psychiatric support and psychiatric diagnoses and calculation of the time from initial presentation to diagnosis and biochemical data of this process, were planned.

After the first admission and evaluation of the patients who applied to the emergency service with suicide attempt, the demographic data of the patients, complaints, symptoms and findings, the psychosocial status before the suicide attempt, the reason of attempted suicide and the method of suicide, if a drug and /or toxic substance selected for suicide where they provided it, medical and social histories were planned to be taken from patients or their relatives.

This study is a cross-sectional study of 533 parasuicid cases admitted to our emergency department between May 2008 and January 2012 (45 months). An informed consent form was obtained from each patient regarding the study, agreeing to participate in the study. For statistical analysis, SPSS.19 (Statistical Package for Social Sciences) for Mac (SPSS Inc., Chicago, IL, USA) program was used when evaluating the calculated data. Averages were shown with standard deviations. Statistical analysis of categorical variables was done by "chi-square" test and numerical variables were analyzed by "t test" and Mann Whitney U test. The data were divided into groups and logistic regression analyzes were performed. Results were accepted as significant at $p < 0.05$ level.

Results

Of the 533 patients included in the study, 66.8% (n = 356) were female, and the average age of all patients was 25.7 ± 9.9 (minimum 14, maximum 88). The distribution of the patients who applied to our emergency department according to years is given in the table. In 2009-2010-2011, there was no difference according to gender among the applicants for suicide attempt in the emergency department ($P > 0.05$).

Patients attempting suicide by taking antidepressants were significantly higher in women than men (30.9% to 19.8%; P = 0.007) and ethanol intake was significantly higher in men than in women (4.5% to 0.6%; P = 0.002) (Table: 1).

There are also significant differences in sociocultural characteristics of patients by gender. It was found that women were generally less educated than men (Table 2). Parasuisid rates increase in the case of being married in females (42.4% vs. 32.2%) and in males in the case of being single (67.8% vs. 57.6%) (P = 0.023) (Table 2). The employment status of patients admitted to the emergency department according to gender reflects the general employment situation of eastern and northeastern Anatolia and being unemployed is significantly higher in females than males (63.5% to 31.6% P = 0.001) (Table 2).

Discussion

In our study, the majority of patients who attempted suicide are young married or single housewives and these patients are characterized by low educational status. In some studies from our country, "a similar relationship was found" also encountered in the patient group[26,27]. We thought that the feudal way of life in our region caused social pressure on women and women were not able to decide about their lives, so women could not find a way out and expressed their helplessness through suicidal behavior. In addition, this situation may be explained by some biological differences between women and men, as well as the differences in coping ways used by men and women. It also supports the idea that women are more affected by the events they experience than men and that women are more open and comfortable than men in terms of asking for help[28].

In general, it may be based on socio-cultural reasons such as family incompatibility, low literacy rate, difficulties or prevention of girls having education, immigration from rural to urban, forced marriage in early age, marriages based on religious wedlock, social changes, rapid role changes, the fact that young girls cannot tolerate their own realities in a patriarchal society as a result of their contradiction with a different culture presented by media.

Suicidal attempt rates of married people are lower than singles, suggesting that marriage is a strong preventive against suicide. In a study conducted at Erciyes University in Kayseri, suicide was found to be more prevalent in single men and married women in accordance with our findings[29]. While marriage increases the responsibilities and roles of a woman, it seems to be an institution that causes less change in the basic factors of life of a man in our country. Our data also show that women's suicide attempts increased by marriage, which could explain this situation.

Table 1. Examination of the drugs taken by patients according to gender

Drug	Female n (%)	Male n (%)	P
Organophosphate intake	41 (%11,5)	20 (%11,3)	0,533
Antidepressant intake	110 (%30,9)	35 (%19,8)	0,007
Analgesic intake*	73 (%20,5)	35 (%19,8)	0,843
Antihypertensive intake	14 (%3,9)	12 (%6,8)	0,151
Salicylate intake	9 (%2,5)	10 (%5,6)	0,067
Paracetamol intake	67 (%18,8)	24 (%13,6)	0,128
Antibiotic intake	52 (%14,6)	16 (%9,0)	0,070
Other medication intake	212 (%59,6)	92 (%52)	0,096
Ethanol in blood	2 (%0,6)	8 (%4,5)	0,002
TCA in urine	16 (%4,5)	4 (%2,3)	0,201
THCB in urine	5 (%1,4)	6 (%3,4)	0,129
Benzodiazepine in urine	9 (%2,5)	2 (%1,1)	0,285
Paracetamol in urine	24 (%6,7)	10 (%5,6)	0,627

Conclusion

With the social and economic changes experienced in and around Erzurum province, it can be predicted that suicidal behavior will increase and will continue to increase and it will be a serious public health problem over time. In our study, we found that suicidal attempts were more common in married women and single men. As a result of our study, in patients with suicide and suicide attempt; women were in the majority and most of our patients were under 30 years of age. In suicide and suicide attempt methods, drug intake was found mostly.

The existence of sociological, biological and psychological aspects of suicide and suicide attempts and eliminating the risk factors associated with them are vital to prevent suicide attempts. In our emergency service when we encountered a patient who attempted suicide; the health care personnel should provide the patient with adequate and appropriate time, try to understand the patient, and gain the patient's trust by acting calmly and carefully. The condition of patients who attempted suicide should be informed to their family.

Table 2. Sociocultural characteristics of patients by gender

Sociocultural characteristic		Female n (%)	Male n (%)	P
Education	Not literate	39 (%11)	1 (%0,6)	**<0,0001**
	Literate	26 (%7,3)	6 (%3,4)	
	Primary education	113 (%31,7)	63 (%35,6)	
	High school	112 (%31,5)	78 (%44,1)	
	University	63 (%17,7)	28 (%15,8)	
	Unknown	3 (%0,8)	1 (%0,6)	
Marital Status	Married	151 (%42,4)	57 (%32,2)	**0,023**
	Single	205 (%57,6)	120 (%67,8)	
Employment status	Employee	31 (%8,7)	72 (%40,7)	**0,001**
	Unemployed	226 (%63,5)	56 (%31,6)	
	Student	92 (%25,8)	36 (%20,3)	
	Unknown	7 (%2)	13 (%7,3)	

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