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Schizophrenia, Violence and Homicidal Act: Assessing The Risks, Preventive Measures and Place of Clozapine in The Treatment

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ABSTRACT

Schizophrenia, violence and homicidal act: assessing the risks, preventive measures and place of clozapine in the treatment

Objective: This review is designed to analyze the potential risk factors and preventive measures involved in homicidal behaviors in schizophrenic individuals and investigate the efficacy of clozapine in preventing these violence behaviors and evaluate the results.

Method: For this purpose, the psychiatry literature was comprehensively reviewed. A screening of the articles in the international and national databases, covering the period between 1979 and 2010 was performed. Trials that have contributed to this field were also utilized.

Results: Although the risk of homicidal behaviors is higher in the schizophrenic individuals compared to the overall population, little is known about the relevant conditions triggering this act of violence among criminals. The available results suggest that certain factors, including some socio-demographic characteristics, male gender, young age, alcoholism, substance abuse, incompliance with the treatment, fulfillment of the criteria for antisocial personality disorder and paranoid subtype, history of suicidal ideation and attempts, and history of frequent hospitalization increase the probability for occurrence of violent episodes.

Conclusion: In the clinical practice, the patients with a risk of committing homicide should be detected and monitored closely. The available data show clozapine to be the most rational therapeutic choice in preventing the acts of violence in schizophrenics.

Key words: Schizophrenia, violence, homicide, risk factors, preventive measures, clozapine

ÖZET

Şizofrenide şiddet ve cinayet eylemi: Risklerin değerlendirilmesi, önleyici tedbirler ve tedavide klozapinin yeri

Amaç: Bu gözden geçirme yazısı, şizofreni tanılı bireylerde cinayet işleme davranışının ortaya çıkmasında rol oynayabilecek risk faktörlerini, önleyici tedbirleri analiz etmeyi ve bu şiddet davranışlarını önlemede klozapinin etkinliğini tartışmayı ve sonuçlarını değerlendirmeyi amaçlamaktadır.

Yöntem: Bu amaca yönelik olarak, psikiyatri yazını kapsamlı şekilde incelenmiştir. Uluslararası ve ulusal veri tabanlarında 1979-2010 yılları arasında bulunan makaleler taranmıştır. Bu alana katkılar sağlamış araştırmalardan yararlanılmıştır.

Bulgular: Şizofrenili bireylerde cinayet davranışlarının görülme riski, genel popülasyona göre daha yüksek olmasına rağmen, şizofrenili suçlularda bu şiddet eylemlerini tetikleyen durumlar hakkında çok az şey bilinmektedir. Mevcut bulgular; bazı sosyodemografik özellikler, erkek cinsiyet, genç yaş, alkolizm, madde kötüye kullanımı, tedaviye uyumsuzluk, antisosyal kişilik bozukluğu ve paranoid alt tip ölçütlerini karşılama, intihar düşüncesi ve intihar girişimi öyküsü ve hastaneye sık yatış öyküsünü içeren faktörlerin şiddet epizotlarının ortaya çıkma olasılığını arttırdığını ileri sürmektedir.

Sonuç: Klinik pratikte, cinayet işleme riski taşıyan hastalar tespit edilmeli, yakın ve sık takibe alınmalıdırlar. Elde-ki mevcut veriler, şizofrenlerde şiddet davranışlarını önlemede klozapinin akla en uygun tedavi seçeneği olduğunu göstermektedir.

Anahtar kelimeler: Şizofreni, şiddet, cinayet, risk faktörleri, önleyici tedbirler, klozapin

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INTRODUCTION

Experts proposed in 1980s that individuals having schizophrenia and psychotic disorder diagnoses do not have high risks of violence (1). However, after publication of several studies in the last 20 years, this view started to change and presence of a medium-sized correlation has been being discussed (2).

It was proposed that individuals diagnosed with schizophrenia have tendency to violent behavior but this

opinion is still under debate (3). It was reported that prevalence of individuals with schizophrenia who committed murder among all murder cases is higher than prevalence of schizophrenia in general population (4,5,6). Prevalence of committing murder may vary among countries. For example, rate of murder cases in England and Wales are relatively lower than United States of America (USA): this rate is 1.8/100,000 in England and Wales but 5.5 in USA (7). In a 3-year follow-up study, among 1594 people who committed murder, 85 (5%) were found to get diagnosis of schizophrenia (8).

These rates raise the question of which characteristics of people with schizophrenia who committed murder differ from other people with schizophrenia. There are some studies about socio-demographic and clinical characteristics of these individuals and identities of their victims. This gives valuable information about these individuals who tend to behave violently and commit murder. However, it is still difficult to form a specific group and determine risk factors (9). Male gender, paranoid sub-type, low socio-economic status (10), alcohol abuse (11), substance abuse (5), non-compliance with medical treatment (12), presence of active delusions during murder (13) and presence of antisocial personality (14) are among risk factors. In a study which patients without criminal liability were evaluated in USA, Canada and Japan, socio-demographic characteristics of patients were found similar. In this study, all patients including some without schizophrenia were found to be between 20 and 29 years old, male, single, unemployed, had low educational level, committed violent crimes, having severe psychiatric disturbances and had both criminal and psychiatric history. (15). In a study done in Turkey, 898 patients admitted through legal channels were evaluated retrospectively, and it was found that, similar to previous studies, mostly 21-30 age group committed crime and 67% out of 840 male patients committed crime previously as well (16).

METHODS

This review aims to present current research and evaluate their results in order to enlighten risk factors which may have a role to bring out murder behavior in individuals with schizophrenia and to take precautionary measures. National and international psychiatry literature was reviewed for this purpose. National and international articles published between 1979 and 2010 were reviewed at international databases such as PubMed and Embase and national databases such as Ulakbim, Turkish Medical Index and Turkish Psychiatry Index by using keywords mentioned in the abstract section. The researches that made significant contributions to the field have been beneficial sources used in this study.

Characteristics of Patients Showing Violent Acts Resulting in Murder

General Characteristics

Fazel et al. (17) reported that murder commitment risk is 0.3% in patients with schizophrenia while this risk is 0.02% in general population.

Socio-demographic characteristics of mentally-ill patients who do not have criminal liability are similar to each other. These patients were not only schizophrenics involved in criminal events but consisted of all mentally-ill patients who do not have criminal liability. Most of them were between 20 and 29 years old, male, single, unemployed, having low educational level, committed violent crimes, having severe psychiatric disorder and had both criminal and psychiatric history previously (15). Obligatory post-treatment clinical conditions of 90 patients with schizophrenia who had no criminal liability were examined by Öncü et al. (18) and they found that 62% were single, this rate became 86.6% by divorce and separation but only 16.7% were living alone, most of them were unemployed both pre- and post-treatment and patients with low social functionality committed crime repetitively after dismissal. In a retrospective study done with 469 patients in Turkey, it was reported that only 5% of these patients have social security (19). In another study (10), out of 49 patients who committed murder 43 were men and 6 were women. Mean age was approximately 37, majority of patients (61.2%) were living in urban areas, most of them have low educational level and 75.5% were

unemployed. In a study done with schizophrenia patients who committed and who did not commit crime, more paternal death was detected in the group committed crime (20).

Identities of Victims

When identities of victims were analyzed based on a British study, it was reported that 55% of murder actions were towards a family member, 22% were towards someone known and 14% were towards someone not known (8). In a study done in Turkey, it was found that majority (69.4%) of murder victims were a family member and 10 out of 49 patients diagnosed schizophrenia murdered their spouses (10). In another study done in Turkey, records of 1831 criminal cases were retrospectively analyzed and it was found that the group having a mental disorder committed more crimes towards their family members but the group having criminal liability mostly targeted their friends or foreigners (21). In another study done in Turkey, intrafamilial murder rates of psychotic patients were found 64% and schizophrenics showed killing behavior mostly (22).

Some Clinical Characteristics of Patients

According to a study, 25% of individuals diagnosed with schizophrenia have never applied to a psychiatry clinic before; despite, they had clinical symptoms of schizophrenia for a long time (4). It was proposed that high prevalence of comorbid personality disorders in schizophrenics who showed violent behavior and committed murder, (23) and particularly antisocial type is prevalent (24). Acute positive symptoms are particularly predominant in these individuals during murder action (25). In addition to these, presence of persecutory delusions may worsen the situation in patients with schizophrenia whom have tendency to violence. History of previous violence probably towards themselves and others is present in these individuals (26). Factors such as alcohol abuse (11), substance abuse (5) and non-compliance with medical treatment (12) were found to be related with violent behavior and murder action. In a study done in Turkey, it was observed that out of 49 individuals with schizophrenia who committed murder, 42 met paranoid sub-type, 5 met disorganized sub-type, 1 met residual and 1 met undifferentiated sub-type criteria. Majority of cases in this study were individuals with paranoid schizophrenia. Also, it was detected that 42 patients were not taking their medications regularly and only 10 patients took their medications at the day of murder action (10).

In Finland, 1423 individuals who committed murder in 12-year period were analyzed and it was reported that chance of committing murder of individuals with schizophrenia who did not get comorbid alcoholism diagnosis were 6 times higher than normal individuals, alcoholism and schizophrenia comorbidity increased this rate up to 17 times (27). Early onset (28), previous suicidal attempts (29), frequent hospitalizations (28), hostile behaviors when hospitalized (30) and history of criminal hostility (31) are indicators of severe risk potential generally from tendency to violence point of view. An interesting correlation is the hypothesis of synchronous suicidal ideas found in 86% of individuals with schizophrenia having murder intent (29). In a study, it was found that 55% of treatment-resistant hostile schizophrenia patients were found to have suicidal ideas (32).

DISCUSSION

In general, violent behavior tendency of patients with schizophrenia has been subject to debate and an unclarified issue (3). Prevalence of individuals with schizophrenia among murderers were reported to be higher than prevalence of schizophrenia among general public (4,5,6). In a three-year follow-up study, 85 out of 1594 people who committed suicide (5%) were found to have schizophrenia diagnosis (4). This statistical data suggests that this is a public health issue. Similar findings remind a few questions: "What are the differences between individuals with schizophrenia having tendency to violence or further committing murder and other individuals with schizophrenia? In addition to this, which factors affect risk of committing murder? By determining these risky individuals, is it

possible to prevent violent acts which may reach to committing murder?"

General and clinical characteristics mentioned above indicate that a risk group can be identified. Factors such as male gender, low socio-economical status, being unemployed, not admitted to a psychiatry clinic despite psychotic symptoms, having antisocial personality traits, exacerbation in acute psychotic symptoms, presence of alcohol and substance abuse, previous violent acts, pre-defined paranoid sub-type, non-compliance wtih antipsychotic treatment, frequent hospitalizations and presence of suicidal ideas direct patients towards violence and subsequent murders.

Non-compliance with treatment are thought to have serious relations with violent behaviors in patients with schizophrenia. It was proposed that substance abuse accompanying treatment non-compliance may increase risk of violence (33). Fazel et al. (17) found in their meta-analysis that a great portion of risk of committing murder in patients with schizophrenia was due to substance abuse present in these patients. Moreover, it was stated that risk of committing violent act of these patients who have comorbid substance abuse is similar to patients with substance abuse but without psychosis. Actually these findings indicate that preventive programs focusing on substance abuse may be effective in reducing violent acts in these cases (17).

Another meta-analysis showed that 38.5% of all homicides were at the first psychotic episode and just before treatment started. Because homicide risk at that period is 15.5 times higher than post-treatment, early treatment of the first episode may prevent some of the murder attempts (34).

In another study, it was found that 86% of schizophrenia patients having murderous ideas have suicidal ideas as well (29). In another study, 55% of treatment-resistant and hostile schizophrenia patients found to have suicidal ideas (32). In this context, suicidal ideas in patients with schizophrenia may be perceived as predictors of hostile behavior. However, data in this field is inadequate. It will be difficult to make generalizations.

After examining 39 cases under psychosis during homicidal act, it was found that 10.2% of acts were due to errors of therapists or legal authorities and 15.4% were found to be able to be prevented by close communication of therapist and family members. In this study, it was concluded that all family members should get involved in the treatment and threats of psychotic patients should be taken into consideration (35).

Family members can also be targets of schizophrenia patients having that risk. Patients with schizophrenia who are married and carry risk potential may particularly target their spouses. It was detected that violent act is generally directed towards a family member or someone close (8). At least, relatives of risky individuals should be warned and be reminded that treatments of these patients should be handled with care.

Current data indicate that clozapine is the most rational treatment option to prevent violent behaviors in schizophrenia patients. Although not adequate, highest amount of data for the prevention of violent behaviors and aggression are from studies done with clozapine. In the study of Buckley et al. (36), clozapine use in two groups of patients with schizophrenia with or without a history of violent behavior showed that clozapine use significantly reduced aggressive behaviors in the first 6 months of treatment in the group with violent behaviors. Spivak et al. (37) found significant decrease in impulsivity and aggressiveness in their retrospective, open-label study which they treated 14 neuroleptic-resistant schizophrenia patients for 18 weeks. In their retrospective, case cohort review, Rabinowitz et al. (38) reported significant reduction in verbal aggression in 75 patients taking clozapine. In their open-label study which included 123 treatment-resistant schizophrenia patients, Volavka et al. (39) found that clozapine showed serious decrease in hostility and aggression. Maier et al. (40) reported that 52% of 25 treatment-resistant schizophrenia or schizoaffective patients at a criminal ward were improved by clozapine treatment and became more positive legally or transferred to lower security units due to improvement. In another prospective study by Ebrahim et al. (41) which 27 patients with paranoid schizophrenia were included, clozapine treatment significantly reduced hostility and aggression. Results with clozapine suggest that these cases may be

treatment-resistant. However, this efficacy may be related with regular medication use of patients. There is need for more comprehensive and comparative drug studies. Nevertheless, limited data available indicate that clozapine is the most rational treatment.

It is possible to predict violent acts which may result in murder. It should be kept in mind that a special group with schizophrenia has more risk factors. Substance abuse is an important and foremost risk factor. Other risk factors should also not be undervalued. Close follow-up of patients with schizophrenia and actively organizing their treatment are among preventive measures. Otherwise, it will be inevitable to overlook these patients and have unpleasant consequences. However, it should be known that not all patients diagnosed as schizophrenia are prone to violence but a special group has the severe hostility potential which may conclude with death. Unnecessary and exaggerated agenda may stigmatize all patients. Everybody should be extremely careful when discussing these issues.

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