

Suicidal Risk Assessment in Hospitalized Schizophrenic patients

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Abstract: Schizophrenia is a disorder with an estimated suicide risk of 4–5%. Many factors are involved in the suicidal process, some of which are different from those in the general population. Clinical risk factors include previous attempted suicide, depression symptoms, male gender, substance abuse, psychosis and hopelessness. Biosocial factors, such as a high intelligence quotient and high level of premorbid functions, have also been associated with an increased risk of suicide in patients with schizophrenia. Suicide risk is supposed to be high during the first year after diagnosis. Many of the suicide attempts occur during hospital admission or soon after discharge. Management of suicide risk includes both medical treatment and psychosocial interventions. Still, risk factors are crude; efforts to predict individual suicides have not proved useful and more researches are needed.

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Key words: suicide; schizophrenia; suicide risk; risk factors; uicide attempt; suicide intent; management

1. Introduction

Suicide is defined as a self-inflicted death with evidence that the person intended to die. Suicide remains the ninth leading cause of death worldwide. The most commonly used method of suicide varies by country and is partly related to availability. Common methods include: hanging, pesticide poisoning, and firearms. Around 800,000 to a million people die by suicide every year.(1)

Schizophrenia is a devastating psychiatric disorder affecting approximately 1% of the population worldwide during a lifetime. The onset of the illness occurs relatively early in life, usually in the late teens or early adulthood, and most patients have long-lasting adverse effects. Schizophrenia is a clinical syndrome diagnosed on the basis of symptom profiles, and is characterized by a constellation of symptoms of psychosis, such as abnormalities in the perception or expression of reality, as well as negative symptoms, such as affective flattening and avolition. (2)

People with schizophrenia are known to die much earlier than expected. Up to 40% of this excess premature mortality can be attributed to suicide and unnatural deaths, **palmer et al., 2005** estimated a lifetime suicide risk of 4.9% for people with schizophrenia. Detection of those at risk is clinically important, but risk prediction is known to be imprecise.(3)

An earlier systematic review of risk factors for suicide in schizophrenia identified 29 high quality data containing studies which were analysed for individual risk factors. Also found, perhaps unsurprisingly that many of the important risk factors for suicide in schizophrenia were similar to those in the general population, including mood disorder,

recent loss, previous suicide attempts, and drug misuse.(4) However, some other factors they identified as associated with high suicide risk in schizophrenia, such as fear of mental disintegration, agitation or restlessness, and poor adherence with treatment, are not immediately self evident. Interestingly, the review also observed a reduced risk of suicide associated with the presence of hallucinations.(5)

The aim of the study:

The aim of the work is to assess the suicidal risk in patients with schizophrenia who are admitted to Tanta mental hospital. To study the risk factors of suicidal behavior among hospitalized schizophrenic patients in Tanta mental hospital. To assess severity of suicidal ideation and degree of seriousness of suicide intent in patients.

2. Subjects and methods

Type of study: Cross sectional study. All patients with schizophrenia of ages ranging from 18 to 60 years old and met the inclusion criteria who are admitted to Tanta Mental Hospital (it is a governmental hospital located at Tanta) through 6 months will be included in this study.

Selection of patients: All patients who are admitted to Tanta Mental Hospital during the period of study and met the inclusion criteria. Clinical and psychometric evaluation are done by specialist then researcher in Tanta mental hospital to diagnose the patients who are fulfilled inclusion criteria (male or female patients aging between 18 and 60 years old, diagnosed as schizophrenic patient according to DSM V criteria, giving informed consent to participate in our study). The patients who are excluded from participating in

this study are those patients complaining of serious medical conditions e.g. tumours, chronic physical disease and other serious conditions. MINI (Mini International Neuropsychiatric Interview-suicidality module) and SIS scale (Suicide Intent Scale -Arabic versions) applied to the patient in the ward within one or two days of admission to assess suicide risk during the past month by using MINI (suicidality module), and to assess the degree of seriousness of the suicide intent in patients who have actually attempted suicide by using SIS scale (assess of the last suicide attempt). After one week of admission, BSI scale (Beck Scale for Suicidal Ideations- Arabic version) applied to the patient to assess suicide risk during the past week.

3. Results and discussion:

The mean age of studied group was 29.42 years old (sd = 9.8) and range was (18-55), the number of male patients in studied group was 33 (62.3%), females number was 20 (37.7%). Most of patients was found to live in urban areas 38 (71.7%) and there were 15 patients (28.3%) live in rural areas. regarding marital status, more than half of patients were single (54.7%), (24.5 %) were married, (18.9%) were divorced, (1.9%) were widowed. (24.5%) of patients were illiterate, (28.3%) went to primary school, (20.8%) went to preparatory school, (15.1%) went to secondary school, (11.3%) had university degree. (46.2%) of studied group were employed, (42.3%) were non employed, (11.5%) were still students. according to sis (suicide intent scale) there were (45.3%) of patients who had no suicide attempt, (18.9%) of patients had no intent to die by suicide attempt, (22.6%) had low intent, (7.5%) had medium intent, (5.7%) had high intent, the mean value of (sis) was (4.33) and sd = 6.52 with range of (0-22). According to bsi (beck scale for suicidal ideation), (32.1%) had no suicidal ideation, (50.9%) had mild suicidal ideation, (5.7%) had moderate suicidal ideation, (11.3%) had a great suicidal ideation, the mean value of bsi was (5.6) with sd (standard deviation) = 8.59 and range was (0-31). Regarding mini (26.4%) of patients had no suicidal risk in the past month, (37.7%) had low suicide risk, (24.5%) had medium suicide risk, (11.3%) of patients had high suicide risk, the mean value of mini was (1.21) with sd = 0.97 and range was (0-3).

There was highly significant correlation between educational level and sis scale, increased educational level (secondary, university degrees) has highly significant likelihood of being medium to highly suicidal on sis scale (75%, 66.7 % respectively). That was agreed with **Fenton, 2000**(6) who settled that highly educated and intelligent schizophrenic patients having increased risk of suicide. This may be due to

awareness of health deterioration and impairment in academic functioning in comparison to the premorbid high functioning which usually happened as a consequence of the disease, also increased sense of loss due to illness may increase the suicide risk. In contrast to that, **Altamura., 2007**(7) showed that the highly educational level were not found to be associated with suicidal risk

There was significant statistical relation between presence or history of depressive symptoms and bsi, sis scales and mini. According to sis scale, 100% of patients with medium suicide risk (4 patients), 66.7% of highly suicide risk (2 of 3 patients), 66.7% of mild suicide risk (8 of 12 patients) were evident to have depression symptoms or history of depression. 70.7 % (17 patients) of patients with no previous suicide attempt were evident not to have depression symptoms or history of depression. These results agreed with **Karvonen et al., 2007**(8) and other studies which revealed that depression is one of the most important suicide risk factors in schizophrenics, in that study depression was seen in 57.36% of the patients group having suicidal ideation, while there was no depression in the group not having suicidal ideation. **Harkavy et al., 2004**(9) suggested that depression and depressed mood can serve as a stressor or trigger for suicidal behavior (attempts and ideation) among individuals who are at risk for suicidal behavior and this has been demonstrated among individuals with schizophrenia. According to **Pompili et al., 2004** (10), the depression related aspects of schizophrenia are generally differentiated according to the time at which they occur during the psychotic episodes, contemporaneously with the psychosis or as a "post-psychotic depression" phenomenon, This latter syndrome has been reported as particularly relevant for suicide risk. One study (**Baca et al., 2005**)(11) found no difference in level of depression between attempters and non attempters which disagree with results in the present study. In the present study there were patients under treatment of antidepressants medications because they complaining of depressive symptoms, while others had a history of depression. depression can often be masked or confused with the negative symptoms or side-effects of medication so targeted questions was used to identify depression during the present study.

In the present study there was significant relation between hopelessness and bsi, sis scales and mini. According to sis, 100% of patients (3 patients) with high suicide risk, 100% of patients (4 patients) with medium suicide risk, 83.3% with mild suicide risk reporting periods of hopelessness while patients with no history of suicide attempt, only 37.5 % was positively hopeless. These results consistent with **Nordentoft et al., 2002** (12) who settled that, the

feeling of hopelessness is the most important risk factor for suicidal behavior in schizophrenia, and the importance of hopelessness as a risk factor remains even without a concurrent depression. **Drake & cotton, 1986**(13) found that more than 95% of schizophrenic patients in his studied sample (15 schizophrenic patients) who completed suicide during a 3 to 7 years follow up were hopeless. In the present study most of patients who did not experience hoplessness during their illness referred that to religious causes and family support. Some investigators have drawn attention to the role of insight or awareness of their disorder (and its progression) as affecting the level of hopelessness and suicidality in schizophrenics.

In the present study, 52.8% of patients have positive symptoms and 47.2% have no positive symptoms (hallucinations, delusions, disorganization and formal thought disorder). There was statistical significant correlation between presence of positive symptoms and suicide risk. These results agreed with **Hawton et al., 2005**(14); **Dehert et al., 2001**(15) who stating that positive characteristics increase suicide risk and, during suicide attempts, 80% of patients with schizophrenia have delusions. **Fenton, 2000** pointed out that especially auditory hallucination of positive characteristics play a role in completed suicides. In contrast to that, **Altamura et al., 2007** reported that patients with command hallucinations and those without command hallucinations did not differ on number of prior suicide attempts, nor on a history of violent/impulsive acts. In the present study, it was found that multiple types of delusions were evident (persecution, control, grandiosity), more than hallucinations (auditory), in studied sample all patients deny any commanding hallucinations ordered to kill themselves, while delusions of persecution were evident in increasing suicidal ideations.

In the present study, 47.1% (25 patients) of patients were insightful (awareness of the illness, awareness of the need for treatment, and awareness of the consequences of the disorder) while 52.9% were not. There was a significant relation between presence of insight and suicide risk. This result agreed with **Barak et al., 2008**(16) who compared two groups of patients with schizophrenia: 200 with a lifetime history of suicidal ideation and/or attempts and 133 without any history of suicidality. The group with a history of suicidality had significantly higher levels of both general awareness of illness and hopelessness. While these studies suggested increased awareness of one's illness was associated with suicidal behavior in these patients, it was not possible to determine whether insight was directly related to suicide or only indirectly related via its influence on hopelessness. **Reutfors et al., 2009**(17) reported weak relation

between patient awareness of his disease and suicidal behavior in his follow up study which disagree with the present study and many other studies. In the present study it was found that most patients who were insightful having a history of depression more than others which may be the cause of increased suicidal ideations in these patients especially awareness of deterioration in occupational, social functions that happened after disease.

Results of the present study revealed that; 37.7 % of patients admitted once to psychiatric hospital and 62.3% admitted more than once. There was significant correlation between multiple admission to hospital and sis, bsi scales and mini, 100% of (3patients) of patients with moderate and highly suicide risk were admitted to hospital more than once. These results were consistent with **Qin & nordentoft., 2005**(18) who reported that 64.1% of studied group who are committed suicide had a history of a multiple admission to psychiatric hospitals, This study confirmed previous reports that suicide risk is highly associated with a history of admission to psychiatric hospital and the number of psychiatric admissions itself has been associated with a higher risk of suicide and has been suggested to be indicative of these verity of illness. **Appleby et al., 2007**(19) showed that the suicide risk peaked, not only shortly after discharge, but also Shortly after admission. These results indicating the importance of an immediate assessment of the suicide risk after admission and proper follow up and outpatient treatment immediately after discharge from hospital.

Conclusion

Suicide risk in hospitalized schizophrenic patients is high. many risk factors have strong association with later suicide, namely (according the present study) depressive symptoms, a history of hoplessness, highly educated persons, positive psychotic symptoms, the presence of insight and multiple admissions to mental hospital.

Prevention of suicide in schizophrenia would thus rely on identifying those individuals with the risk factors noted above, and actively treating any comorbid depressive illness and positive psychotic symptoms, as well as addressing any other comorbidities.

Suicide prediction in those with schizophrenia is complicated, and efforts at prevention should also focus on optimizing adherence to treatment. Also using social, occupational and rehabilitation programs is very important.

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