Suicidal Behaviour in Obsessive Compulsive Disorder Patients.

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Abstract:
Background, setting and Design: Obsessive Compulsive Disorder is a disorder with severe refractoriness. The chronicity and the distress caused by this condition is well documented across a large number of studies. Our study aims at studying the suicidal ideation and behaviour in such group of population. Our study single point, non invasive, cross sectional clinical study.

Material and methods: Assessment of suicidal ideation and behaviour in patients attending outpatient department at Chalmeda Anand Rao Institute of Medical Sciences using DSM-IVTR for diagnosing Obsessive Compulsive Disorder and Yale-Brown Obsessive Compulsive rating Scale (Y-BOCS) to assess the severity and Beck's Hopelessness Scale (BHS)and Suicidal Severity Index (SSI) for assessment of Suicidal ideations and Severity of the attempts.

Statistical analysis: Mean Standard deviation, t-test and pearsons correlation coefficient.

Results: Statistically significant differences were seen in the SSI score between the “Clinical” and “Sub-Clinical cases” with Clinical group having higher scores. Value of correlation coefficient between YBOCS score and SSI and BHS score is positive and statistically significant (P<0.01)

Conclusion: Clinical group of patients had significantly higher scores of suicidal ideation measured by Scale of Suicidal Ideation (SSI). There was a significantly positive correlation between disease severity (YBOCS Score) and degree of suicidal ideation (SSI Score).

Key words: obsessive compulsive disorder, suicide, Y-BOCS, BHS, SSI.

Introduction:
OCD is a chronic mental illness that is associated with significant disability and suffering. Indeed, people with OCD often report serious difficulties in relationships and problems at work. For some people, living with OCD can become overwhelming and can cause them to lose hope and to contemplate or even attempt suicide.

Suicidal behaviour includes suicidal ideation and suicidal attempts. This is the result of a complex interaction of biological, genetic, psychological, sociological, environmental factors. Life threatening attempts are more common than fatalities. 15% of untreated depressed patients may commit suicide. Obsessive Compulsive Disorder (OCD) is chronic distressing anxiety disorder associated with significant functional impairment [1]. Although it has long been known that the risk of suicide is higher for people who are affected by mood disorders and schizophrenia, the relationship between anxiety disorders, such as OCD, and suicide has been less clear. However, recent studies suggest that between 5 and 25% of people with OCD have attempted suicide at some point in their lives [2]. Actively thinking about suicide (sometimes called suicidal ideation) also appears to be relatively common among people affected by OCD. The estimated lifetime prevalence of suicidal ideation, plan and attempt in a large overall cross-national sample (N = 84 850) was 9.2%, 3.1% and 2.7%, respectively [3].

Factors that predict whether someone with OCD will attempt suicide include the severity of their OCD symptoms, the co-occurrence of depression, feelings of hopelessness, the presence of a personality disorder such as obsessive-compulsive personality disorder, and a prior history of self-harm (such as cutting) [4].

A much less extensive but consistent literature indicates co morbidities between OCD and other psychiatric disorders. Nevertheless the influence of subtypes of OCD, such as sexual obsessions, on suicidal behaviors, in patients with a psychiatric diagnosis, was scarcely investigated. In one study [5], results indicated that 36% of patients with OCD reported lifetime suicidal thoughts, 20% had made suicidal plans and 11% had already attempted suicide.

Suicidal ideation refers to cognitions that can vary from fleeting thoughts that life is not worth living to very concrete well thought out plans for killing oneself, to an intense delusional preoccupation with
self-destruction [6]. They also reported a cumulative probability of 34% for transition from ideation to a plan, 72% from a plan to an attempt and 26% from ideation to an unplanned attempt. The more detailed and specific the plan, the greater will be the level of risk.

In a prospective study on 1958 outpatients, Beck et al. [7] found that hopelessness was highly correlated with eventual suicide. In addition to hopelessness, Hendin [8] identified desperation as another important factor in suicide. Desperation implies not only a sense of hopelessness about change but also a sense that life is impossible without such a change. The risk factors of suicide are identified as Male gender, unemployment, Divorced/Widowed, chronic illness, hopelessness, substance abuse, psychosis, severe depression, familial conflicts, previous attempts of suicide [9].

**Suicide and psychiatric disorders:**

Suicide is a multidimensional concomitant of psychiatric diagnoses, especially mood disorders, and is complex in both its causation and in the treatment of those at risk. Psychiatric diagnoses classically associated with completed suicide include mood disorders, schizophrenia, and addiction disorders [10]. The highest risk of suicide occurs in the presence of multiple co-morbid conditions, particularly combinations of affective or psychotic disorders with abuse of alcohol or drugs.

**Comorbidity in Obsessive Compulsive Disorder:**

Patient with OCD often suffer from one or more co-morbid disorders. Major depression has been the most common co-morbid syndrome, lifetime prevalence of which is reported between 12 and 70% [11]. Lifetime prevalence of co-morbid anxiety disorders in OCD patients was noticed to be 25 to 75% [12]. Recent studies have depression as a poor prognostic factor [13,14] but many others [15] have reported response to be independent of co-morbid depression. Discontinuation of medication carries a high risk of relapse.

In a study by Rudd [16] and colleagues, 6.7% of suicidal patients received a diagnosis of OCD. Among the 18571 respondents in NIMH-ECA study, 140 were diagnosed with DSM-III OCD and 266 with OCD as a co-morbid disorder. Uncomplicated OCD increased the risk of suicide attempts to 3.2 times (95% CI 1.3-8.1) compared to healthy respondents. Even after the removal of those with major depression or agoraphobia, the odds ratio for suicide attempts in co-morbid OCD was 3.7%.

The above literature suggests that OCD is associated with significant risk for suicide and there is a need to assess the prevalence of suicidal ideation or suicidal behaviour in patients suffering from OCD. The present study, therefore, is aimed at to identify the prevalence of the suicidal behavior in subjects seeking the treatment of psychiatric hospital.

**Materials and Methods:**

**Aim**: To assess the Suicidal Behavior in patients of Obsessive Compulsive Disorder (OCD) attending the adult Psychiatry O.P.D. of Chalmeda Anada Rao Institute of Medical Sciences, Karimnagar.

**Study design**: The present work is a single point non-invasive, cross sectional, clinical study of new and follow up cases of OCD attending psychiatric outpatient section, which involves the assessment of suicidal behaviour in the patients. Informed consent was taken from all the subjects. The study was conducted between May, 2014 and December, 2014.

**Study sample**: The study sample consisted of patients of obsessive compulsive disorder, attending the outpatient section of the Department of Psychiatry, CAIMS, Karimnagar. Patients fulfilling the following selection criteria were included in the study.

**Inclusion criteria:**

- Willingness to give informed consent
- The age of the patient was 18 years to 45 years
- Diagnosis of Obsessive Compulsive Disorder according to DSM-IV
- Duration of Obsessive Compulsive Disorder one year or more
- The subject should have passed at least Class eighth, according to Indian Standards.

**Exclusion criteria:**

- Presence of any other Axis I disorder on the DSM-IV
- History of psychoactive substance dependence or significant abuse (except nicotine)
- Presence of any serious physical disorder.

**Procedure:**

The patients attending the adult out patient clinic of the Department of Psychiatry CAIMS were screened. The patients fulfilling the above mentioned inclusion and exclusion criteria were invited to participate in the study. The patients were assessed on the same day or were asked to come for evaluation on a mutually convenient day.

**Tools:**

- Semi-structured proforma for details, history and diagnosis of patient
- Diagnostic and Statistical Manual of mental disorders-IV (DSM-IV) criteria for diagnosis of Obsessive Compulsive Disorder
- Structured Clinical Interview for DSM-IV Axis-I disorder
- Yale Brown Obsessive Compulsive Rating Scale
- Scale for Suicidal Ideation (SSI) [17].
- Beck’s Hopelessness Scale (BHS) [18].
Observation and Results:
In all 100 patients were screened, out of which 36 were excluded for reasons as specified above. Out of the 66 patients included, 14 patients did not turn up on the prearranged date for assessment and were thus excluded from the study. In all, assessment of 52 patients was completed and these patients formed the sample for this study.

Table: Gender & Age – Group wise Patients:

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>18</td>
<td>34.61%</td>
</tr>
<tr>
<td>Female</td>
<td>34</td>
<td>65.39%</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Age-Group</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>22</td>
<td>42.31%</td>
</tr>
<tr>
<td>26-34</td>
<td>24</td>
<td>46.15%</td>
</tr>
<tr>
<td>35-45</td>
<td>06</td>
<td>11.54%</td>
</tr>
</tbody>
</table>

Table 2: Comparison of Suicide Attempters & Non-Suicide Attempters on Y-BOCS, BHS & SSI.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Suicide Attempters (N=11) Mean ± S.D.</th>
<th>Non-Suicidal Attempters (N=41) Mean ± S.D.</th>
<th>t-Value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y-BOCS</td>
<td>15.70± 3.56</td>
<td>7.50± 4.32</td>
<td>9.57</td>
<td>P=0.18 NS</td>
</tr>
<tr>
<td>BHS</td>
<td>10.00± 1.33</td>
<td>5.50± 2.50</td>
<td>8.45</td>
<td>P=0.001 S</td>
</tr>
<tr>
<td>SSI</td>
<td>10.50± 1.58</td>
<td>5.50± 1.93</td>
<td>6.42</td>
<td>P=0.002 S</td>
</tr>
</tbody>
</table>

Table 3: Correlation of YBOCS score with scores of other scales

<table>
<thead>
<tr>
<th>Correlation Between</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>YBOCS and SSI</td>
<td>0.51</td>
</tr>
<tr>
<td>YBOCS and BHS</td>
<td>0.48</td>
</tr>
</tbody>
</table>

Two subgroups were formed: (a) ‘subclinical’ group (Y-BOCS Score seven or less) which was having 22 subjects and (b) ‘clinical’ group (YBOCS score of eight or more) and this group had in all 30 subjects. All the subclinical cases were follow up cases of OCD who were in remission and under treatment. The clinical group comprised mild, moderate and severe group all clubbed together.

Comparison of suicide attempters and non-attempters on different scales:
Comparison of scores of severity of OCD (YBOCS), hopelessness (BHS) and suicidal ideation (SSI) between the patients having history of suicide attempt and those who had no history of suicide attempts has been done above. The patients with suicide attempt had a significantly higher score on the BHS and SSI. Table 2 shows that there was no significant difference between the scores of YBOCS in the two patient populations. The Table II depicts value of Pearson correlation coefficient between YBOCS score with score on scale (BHS) and suicide intent scale (SSI). On both the scales the value of correlation coefficient is positive and statistically significant (P<0.01).

Discussion:
The domain of suicidal behavior is multidimensional with many factors. The present study was carried out to assess the suicidal behavior in OCD.

Out of 66 patients included in the study only 52 patients completed the assessment. To minimize the attrition on follow up where possible the assessment of patients were completed on the same day.

Most of the patients included in the study were aged 35 years or less. 42.3% (n=22) patients were in the age group of 18 to 25 years and (n=24) 46.15% were in the age group of 26 to 35 years and around (n=6) 11% patients were between 36 to 45 years of age group. This finding is in conformity with an occurrence of this disorder in a younger age group[19]. The younger age of the study population is also due to the fact that patients who were aged 45 or more were excluded to reduce the age related factors for suicidal behavior.

Our study included 34 female (65.38%) patients and 18 (n=34.6) male patients. This is consistent with majority of the studies revealing female preponderance [20, 21].

The quality of life was impaired in majority of the patients in terms of occupational and domestic work satisfaction (50%). This finding concurs with the fact that OCD is a disabling disorder. Similar findings have also been reported and emphasized in studies by Koran et al [22] and Eisen et al [23].

The mean duration of illness in the patient group was 5.01±2.47 years. Longer duration of illness in the present as well as past studies substantiates the
The severity of the obsessive compulsive disorder in the patients was measured by the Y-BOCS scale. Majority of the patients (57.69%) were symptomatic and were having a Y-BOCS score of 8 or more. For the purpose of comparison the patients who were having a YBOCS score of 8 or more were clubbed together into a "clinical" group. This group comprised of mild, moderate and severe cases clubbed together. The patients having YBOCS score of 7 or less were included in the "sub-clinical" group. A past history of suicide attempt is a strong predictor for future suicide attempts [24,25]. In the present study past suicidal attempts were present in 11 (19.23%) patients and this is significantly higher than the attempted suicide rates in the general population. The rate in the general population in different parts of India ranges from 8.1 to 58.3 per 1 lac [26]. However, these reports are not reliable owing to the fact, the population counts are unreliable and identifying suicides is problematic due to inefficient civil registration systems, non-reporting of deaths, variable standards in certifying death, and suicide's legal and social consequences[27]. Therefore comparison of the suicide rates with general population and the significance of this finding in present study remains debatable.

The most common method of attempting suicide in the present study was by poisoning (60%). Other studies have also noted that pesticides have become common for intentional poisoning in developing countries [28,29]. The incidence of suicide attempts was more in female compared to male but this difference was not significant. Similar findings of a higher incidence of suicide attempt among females have been reported in other studies, while high rates of completed suicides are reported among men [30, 31]. A score of two or more on SSI was observed in 56% of the patients indicates that about half of the patients in the study had recently contemplated about ending their lives. This is significant and is comparable to depression where studies have shown similar incidence of suicidal ideators [32]. There is no consensus on what is an ideal cut off score on the scale for suicidal ideation to predict future suicide attempt. A score of six or more has been used in earlier studies to differentiate the patients with a serious suicidal risk[32]. In the present study 14 (26.92%) patients had a score of 6 or more signifying that about one fourth patients had significant suicidal ideation. Therefore based on SSI scores alone a significant number of patients had a future suicidal risk.

On analysis of the SIS score among the patient population, clinical group had significantly higher SIS score than that of the subclinical group. This indicates that patient having symptoms of OCD were more at risk of suicide. To further assess the correlation coefficients were obtained between the severity of illness (Y-BOCS Score) and suicidal ideation (SIS Score). Pearson correlation was 0.510 and it was statistically significant. This further strengthens the argument that severity of OCD and suicidal behavior has a positive correlation [33].

Another measure of suicidal behavior is hopelessness and this was also observed in a significant number of patients in the present study. The mean score on the Beck Hopelessness Scale (BHS) was 5.17±3.46. The hopelessness scale varied across the patients, (48.07%) (n=25) had a score of 4 or less. There were 13 (25%) patients who had a BHS score of 9 or more. A BHS score of 9 or more is considered to be a significant risk for future suicidal attempt. A cut off score of nine or above identified 16 (94.2%) of the 17 patients who eventually committed suicide. In the present study 13 (25%) patients of OCD had a score of nine or more on the BHS. Thus taking hopelessness as an independent factor also identified a significant number of patients in our study having significant suicidal risk.

To ascertain the relationship between different variables and hopelessness, a correlation coefficient scores were drawn on YBOCS and BHS. The Pearson Correlation coefficient was 0.48 and it was significant at 0.01 levels. The result establishes that there is a significant correlation between the severity of illness and hopelessness.

The findings of the present study suggest that there is a significant risk of suicide among the patient of OCD. This is noteworthy that depression is common co morbidity with OCD, and is a risk factor for suicide in itself. In the present work however patients with co-morbid depression were excluded and do not contribute to the findings of the study. Limitations:

The results of the study should be interpreted in view of the following limitations:

The high attrition rate (14 out of 66) could have affected the findings of the study. The sample of patients was selected from a tertiary care centre and the patients were on treatment and follow up. The assessment was cross sectional. It is debatable if the findings from the study can be generalized to all the patients of OCD. Also recently diagnosed patients (duration less than one year) were excluded.

The present study addressed and tried to exclude a number of confounding factors such as co-existing psychiatric disorders including depression, substance abuse extremes of age etc., however the suicidal behaviour is affected by many psychosocial and personality factors and the findings of the study may be limited by them. Owing to limited time factor and resources the suicidal behaviour was assessed...
only on the parameters that have been repeatedly used to assess the suicidal behaviour and especially predict future suicidal attempts.

**Strengths:**

The present study included patients who did not have any co-morbid psychiatric illness. Depression is commonly co-morbid with OCD and is a confounding factor for assessing suicidal behaviour. A reliable and valid instrument (Structured Clinical Interview for DSM-IV Axis-I disorders) was used for making a diagnosis, as well as ruling out other Axis I disorder, in the present study and the patients with depression; either past or present were excluded. The patients were rated by a single rater and therefore the inter-rater reliability did not affect the study results. More than one parameter was assessed to ascertain the suicidal behavior. These parameters included past suicidal attempt, hopelessness and suicidal ideation. The use of more than one validated instrument further lessens the probability of chance findings.

**Conclusion:**

A significant number (19.23%) of patients had a history of past suicidal attempt. This finding is important as past suicidal attempt is considered to be a strong predictor for future suicidal attempt. Hopelessness a predictor of future suicidal risk was significantly high in 25% of the patients on the Beck Hopelessness Scale. 26.9% of patients had a significantly high degree of suicidal ideation, with score of 6 or more on Scale of Suicidal Ideation. The “Clinical” group of patients had significantly higher scores of hopelessness measured by the Beck Hopelessness Scale (BHS) when compared to “Sub Clinical” group. The “Clinical” group of patients had significantly higher scores of suicidal ideation measured by Scale of Suicidal Ideation (SSI) when compared to “Sub Clinical” group. Patients having a past history of suicide attempt had significantly higher score of hopelessness and suicidal ideation compared to the patients having no history of suicide attempt.

There was a significantly positive correlation between the disease severity (YBOCS Score) and hopelessness (BHS Score). There was a significantly positive correlation between disease severity (YBOCS Score) and degree of suicidal ideation (SIS Score). Females had significantly higher score on hopelessness (BHS).

**References:**

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