

A Study of Prevalence of Obsessive and Compulsive Symptoms in Persons with Schizophrenia

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Abstract: The presence of obsessive-compulsive symptoms in patients with schizophrenia was observed at the very beginning of the descriptions of the illness. Since the 19th century, cases with both psychotic and obsessive-compulsive symptom have been reported [1]. The relationship between OCD and schizophrenia has aroused curiosity among researchers, and has challenged the practicing clinicians. Earlier studies [2,3] reported a low prevalence rate and benign clinical course in schizophrenia patients with obsessive-compulsive symptoms, which have been challenged in recent years. To study the prevalence and clinical characteristics of obsessive-compulsive symptoms in patients with schizophrenia. This is a cross sectional study done on patients with schizophrenia, who attended outpatient department at Institute of Mental Health Hyderabad. In a period of ten months, consecutive out-patients who fulfilled the ICD-10 criteria for schizophrenia and also met the inclusion, and exclusion criteria mentioned in study were enrolled for the study. By the end, a total of 70 patients had been included in the study. Subject were later administered to clinical instruments like M.I.N.I, PANSS and Y-BOCS. Subjects were divided into two groups based the presence of obsessive-compulsive symptoms as Schizophrenia patients with and without obsessive compulsive symptoms. These two groups were compared to find out if there exists any statistically significant difference between them. Out of the 70 patients studied, 13[18.5%] patients were having obsessive compulsive symptoms. Mean age at onset of obsessive-compulsive symptoms: 17.54 ± 4.02 years. The most common type of obsessive symptom was obsession of contamination, which was found in 10 patients (76.92%). Other most frequent obsessions were aggressive (23%), need for symmetry (23%), and sexual (15.38%). The most common compulsion in the study was cleaning/washing compulsion [92.3]. Among other common compulsions are ordering/rearranging, checking, and counting. This study may conclude that the coexistence of OCS is a relatively frequent finding in patients with schizophrenia, and clinician awareness of the possible co-occurrence of OCS and schizophrenia is warranted.

Keywords: Schizophrenia, Schizo-obsessive disorder, OC symptoms in Schizophrenia

INTRODUCTION

Co-occurrence of OCS and psychotic illness was recognized over a century ago [2]. The interest in this area has increased recently because of recognition of higher-than expected comorbidity rates of OCD and schizophrenia, and also after observing the antipsychotics induced OCS. Patients with comorbid schizophrenia and OCD, termed "schizo-obsessive" by Hawang and Hollander 1993 appear to have distinct patterns of psychopathology, course of illness, psychiatric comorbidity, neurocognitive deficits, treatment response, compared to schizophrenia patients without OCD. A long-standing challenge faced by all investigators in studying the comorbidity between OCD

and schizophrenia is the difficulty in identification of obsessions by distinguishing them from delusions. Thus, the better understanding of OCS psychopathology in patients with schizophrenia is dependent on a careful exploration of OCS and their discrimination from delusions or hallucinations.

Study design

Cross sectional Prevalance study

Place of study

Out-Patient department, Institute of Mental Health, Erragadda, Hyderabad.

Sample size

Seventy patients with ICD-10 diagnosis of Schizophrenia.

Inclusion criteria

- Patients of either sex.
- Age between 18yrs and 60yrs.
- Who fulfil ICD-10 criteria for schizophrenia.
- Ability to

Exclusion criteria

- Patients not willing to give consent.
- Current primary disorder other than schizophrenia.
- Any other co-morbid psychiatric disorder as indicated by M.I.N.I except for OCD or presence of OCS.
- Any chronic medical illness other than stable hypertension and well controlled diabetes mellitus.
- Mental retardation, organic mental disorder, head injury or any active medical condition that could confound diagnosis or clinical characterization of psychopathology.
- Current alcohol or any substance use severe enough to diagnose as substance abuse disorder. speak and understand Telugu or Hindi or English.

MATERIALS

- Master Clinical profile sheet
- ICD-10. Clinical descriptions and diagnostic guidelines[13]
- Mini-International Neuropsychiatric Interview (M.I.N.I [14])
- Positive And Negative Syndrome Scale (PANSS) [15]
- The Yale-Brown Obsessive Compulsive Scale (Y-BOCS)[16]

METHOD

The present study was a cross sectional study done on patients with schizophrenia, who attended outpatient department at Institute of Mental Health Hyderabad over a period of ten months between November 2015 and August 2016.

In a period of ten months, consecutive out-patients who fulfilled the ICD-10 criteria for schizophrenia and also met the inclusion, and exclusion criteria mentioned in study were enrolled for the study. By the end, a total of 70 patients had been included in the study, and their information had been systematically recorded. The collected data was later assessed.

After careful explanation of the purpose of the study and its procedure, informed consent was taken from the

patient. Once the written informed consent was taken from the subject, a detailed clinical interview was done. Data related to socio-demographic and clinical characteristic variables were obtained from both patient and informant.

Subject was later administered to clinical instruments like M.I.N.I, PANSS and Y-BOCS. Initially subject was administered Mini International Neuropsychiatric Interview (M.I.N.I) to confirm the diagnosis of schizophrenia, to look for the presence of Obsessive Compulsive symptoms, and also to rule out other psychiatric co-morbidities. PANSS was administered to all subjects to assess the severity of psychotic symptoms. Y-BOCS was administered to those subjects who expressed Obsessive Compulsive symptoms in MINI, to assess the type and severity of OC symptoms.

Subjects were divided into two groups based the presence of obsessive-compulsive symptoms. The two groups were then compared on various sociodemographic and clinical characteristic variables and tests of statistical significance were applied. The correlation between Y-BOCS and PANSS score was tested statistically.

Statistical Analysis

The results are expressed as mean \pm standard deviation for all continuous variables. 't' test for continuous variables and chi square test for discrete variables were used to assess the significance of difference of mean between 2 groups. Pearson's correlation coefficient was used to assess the correlation between positive and negative symptoms of schizophrenia, and obsessive-compulsive symptoms. All p-values were two-tailed and statistical significance was set at $p < 0.05$. All of the above statistical tests were processed by windostat version 9.2.

RESULTS

Totally, 70 patients with schizophrenia were included in the study. Out of the 70 patients studied, 13(18.5%) patients were having obsessive compulsive symptoms. So, prevalence of OCS in patients with schizophrenia from our study was 18.5%. Obsessive-compulsive symptomatology was assessed in those 13 patients and the results are as follows. Mean age at onset of obsessive-compulsive symptoms: 17.54 ± 4.02 years.

Out of 13 patients, in 10 patients (77%) OCSs were present after the onset the schizophrenic symptoms, in 2 patients (15%) OCSs had developed before the onset of schizophrenic symptoms and in 1 patient (8%) onset of OCSs and schizophrenic symptoms could not be demarcated. Among 13 patients, 7 were male and 6 were female patients. Chi square test

value and p value were 0.254 and 0.591 respectively. Out of 70 patients, 54 were from urban background and 16 were from rural background. Among the 13 patients with OC symptoms, 11 were from urban background and 2 were from rural background Chi square test value was 0.46 and p value was 0.477. In the study population 23 were married, 40 were unmarried, 7 were separated. Among the patients with Schizophrenia and OC

symptoms 2 were employed and 11 were unemployed. Among patients with Schizophrenia only 9 were employed and 48 were unemployed. Chi square test value was 0.0012 and p value was 0.971. There was family history of psychiatric illness in 4 patients with Schizophrenia and OC symptoms and 16 patients with schizophrenia only. Chi square test value was 0.035 and P value was 0.849.

Table-1: Obsessive-compulsive symptom profile and Y-BOCS scores (N=13)

Subject	Obsession	Compulsion	Y-BOCS SCORE		
			O	C	T
1	Aggressive	Cleaning/Washing	13	14	27
	Intrusive images	Counting			
	Ordering				
2	Contamination	Cleaning/Washing	14	15	29
	Need for symmetry	Ordering			
		Need to tap			
3	Contamination	Cleaning/Washing	10	12	22
4	Contamination	Cleaning/Washing	9	13	22
		Hoarding			
5	Contamination	Cleaning/Washing	15	18	33
	Sexual				
	Need for symmetry				
6	Contamination	Cleaning/Washing	10	12	22
	Checking				
7	Aggressive	Cleaning/Washing	13	13	26
8	Contamination	Cleaning/Washing	12	13	25
	Lucky/unlucky number	Counting			
	Superstitious fear				
9	Contamination	Cleaning/Washing	9	10	19
	Arranging/Rearranging				
10	Contamination	Cleaning/Washing	13	13	26
	Checking				
11	Aggressive	Checking	10	12	22
12	Contamination	Cleaning/Washing	10	13	23
	Sexual Ordering				
	Need for symmetry				
13	Contamination	Cleaning/Washing	9	13	22
	Repeating routine activities				

Table-2: Type of compulsive symptoms

Compulsion	Number	Percentage
Cleaning/Washing	12	52.2%
Checking	3	13%
Ordering/Arranging	4	17.4%
Counting	2	8.7%
Repeating activities	1	4.3%
Others	1	4.3%

Table-3: Comparison of PANSS scores between two groups

PANSS	Scz with OCS	Scz w/o OCS	't'test value	'P' value
PANSS total	79.92 (9.82)	81.10 (12.3)	0.10	0.74
PANSS +ve	22.84 (2.79)	24.00 (4.62)	0.74	0.39
PANSS -ve	20.23 (5.60)	19.66 (5.19)	0.12	0.72

No statistically significant difference was found in PANSS scores between schizophrenia patients with and without OCS.

Table-4: Correlation between PANSS and Y-BOCS

	PANSS total	PANSS PS	PANSS NS	Y-BOCS total
PANSS total	-	0.6	0.5	-0.14
PANSS PS	-	-	-	-0.29
PANSS NS	-	-	-	0.26
Y-BOCS total	-	-	-	-

The correlation between PANSS total and Y-BOCS total, and between PANSS positive and Y-BOCS Total is negatively correlated. But, the correlation was not statistically significant.

DISCUSSION

The purpose of the present cross-sectional study was to determine the frequency of obsessive-compulsive symptoms in patients with schizophrenia. In this study, 70 in-patients primarily diagnosed as schizophrenia based on ICD-10 criteria and confirmed by M.I.N.I were systematically evaluated for the presence of OCS. This study also tried to compare the clinical characteristics of schizophrenia patients with and without OCS to find out if there are any statistically significant differences between the two groups. The correlation between PANSS and Y-BOCS was tested.

Sociodemographic profile of total sample

Most of the prior cross-sectional studies done to assess the prevalence of obsessive-compulsive symptoms have taken sample size between 50 and 100. So, the sample size of 70 taken in our study matches with them. 70 in-patients between the age of 18yrs and 60yrs were recruited for the study. This is similar to Kayahan et al study [4] where they have also included patients between 18 years and 65 years. The mean age of total sample at the time of admission was 36.27 ± 10.35 years. This is in concordant with Hwang *et al.* [5] with mean age of sample 37 years.

In our total study sample, more were female patients than males (M: F=33:37). Majority of them were from urban locality, unmarried, graduated and unemployed. These finding were similar to Karno *et al.* study[6]. The findings that majority of them were from rural locality and graduates or with minimum of secondary education could be because this study was conducted at tertiary government hospital located at metropolitan city.

Prevalence of obsessive-compulsive symptoms in our sample

In the present study, the prevalence of obsessive-compulsive symptoms among patients with schizophrenia was 18.5% (13 out of 70). This rate is in concordant with the prevalence rate of prior studies.

Obsessive-compulsive symptoms characteristics

The mean Y-BOCS score total was 24.46 ± 3.73 which is concordant with previous study like Eisen *et al.* [7] Y-BOCS score ranged between 17 and 35.

In the present study, out of 13 patients majority of them had both obsessive and compulsive symptoms. This finding is similar to findings of Eisen *et al.* [7] Tibbo *et al.*, [8] Byerly *et al.* [9] which also reported that majority of schizo-obsessive patients present with both obsessions and compulsions.

The most common type of obsessive symptom found among 13 patients was obsession of contamination (table 1). Obsession of contamination was found in 10 patients (76.92%), among those 10 patients, 4 patients had only obsession of contamination, whereas other patients had other obsessions along with contamination obsession. Other most frequent obsessions were aggressive (23%), need for symmetry (23%), and sexual (15.38%).

The most common compulsive symptom reported from this study was cleaning/washing (table 2). Out of 13, 12 patients (92.3%) had cleaning/washing compulsion. Almost all patients had washing compulsion, 3 patients had only washing compulsions, and rest of 9 patients had washing compulsion along with other compulsions. Among other common

compulsions are ordering/rearranging, checking, and counting. These findings from our study are in concordant with previous studies

Comparison between schizophrenia patients with and without obsessive-compulsive symptoms

13 patients with both schizophrenia and OCS were compared with 57 patients with only schizophrenia. These two groups were compared for sociodemographic and clinical parameters.

This study did not find any statistically significant difference in socio demographic variables like gender, education level, marital status, employment status, and also in clinical variables like age at onset of illness, duration of illness between the two groups. Most of the prior studies like, Hwang *et al.* [5], Eisen *et al.*, [7], ohta *et al.* [11] have also reported the similar findings. Also, there was no difference in positive or negative symptoms between the two groups which is concordant with the results from study Byerly *et al.*[9], Ohta *et al.*[11]

Correlation between positive and negative symptoms of schizophrenia, and obsessive-compulsive symptoms

The correlation between positive and negative symptoms of schizophrenia, and obsessive-compulsive symptoms was evaluated. The result from this study showed the negative correlation between PANSS total and Y-BOCS total, and between PANSS positive symptoms and Y-BOCS total. But, the correlation was statistically not significant.

There are previous studies like ohta *et al.*[11] which also reported similar results of no correlation between positive or negative symptoms of schizophrenia, and obsessive-compulsive symptoms. However there is a wide variation with respect to presence of more positive or negative symptoms in patients with obsessive compulsive symptoms. Tibbo *et al.* [10] and Byerly *et al.* [9] studied on only outpatients found the presence of lesser negative symptoms in schizophrenia patients with obsessive compulsive symptoms. Lysaker *et al.* [12] study found the presence of more positive symptoms in schizo obsessive group.

CONCLUSION

In This study coexistence of OCS are relatively common finding in patients with schizophrenia. This may enhance the understanding of illness as well as improve the care, which will positively affect the quality of life. This study also points out the need to routinely evaluate for OCS in persons with schizophrenia and device a treatment plan accordingly.

Limitations

- Only out patients patients were included.
- Patients on anti-psychotic medication for a long time were also included. So, drug induced OCS was not ruled out.
- Rater was not blinded while administering PANSS and Y-BOCS, therefore ratings were potentially subject to bias.

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