

CATATONIA INCIDENCE IN ACUTE PSYCHIATRIC ADMISSIONS

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Eighty six consecutively admitted unmedicated patients, with a current duration of illness of less than two years, who fulfilled ICD-10 criteria for mood disorder or schizophrenia were assessed for catatonic signs over a three week study period. Thirty two of them could be rated as catatonic, most of them starting to exhibit the signs at the time of admission or a few days thereafter. While the percentage of manic patients showing catatonic signs was comparable to earlier studies, a significant proportion of patients belonging to the Schizophrenic and Acute and Transient Psychotic Disorder group also exhibited these signs. The reasons for obtaining such a high percentage of catatonics are discussed. It is contended that short lasting catatonic signs are a common feature of acute psychiatric admissions and are ignored when viewed within the framework of an affective or psychotic illness.

Key words: catatonia, incidence, acute psychiatric admissions.

INTRODUCTION

Estimates vary regarding the exact incidence of catatonic. Some authors (Mahendra, 1981; Lohr & Wisniewski, 1987; Leff, 1988) believe that its incidence has declined since the beginning of this century. The tenth edition of the Present State Examination mentions it to be 'now-a-days very rare'. An opposite camp (Abrams & Taylor, 1976 & 1977; Fink, 1990; Taylor, 1990) believes catatonia to be still quite common; 10% of acute psychiatric admissions and 20% of patients with bipolar affective disorder may show one or more catatonic features (Taylor, 1990).

There are suggestions that catatonic symptoms may be commoner in developing countries (Sartorius et al, 1986). The need for prospective studies to study the incidence of catatonia has been acutely felt (Fink, 1991; Johnson, 1993).

MATERIALS AND METHODS

The present study intended to examine the incidence of catatonic features in a 'functionally' ill non-chronic psychiatric population. Eighty six out of two hundred and forty six consecutive admissions to the Central Institute of Psychiatry, Ranchi, over a two month period between 1st June and 31st July, 1992 constituted the subjects of the study.

The following were the inclusion criteria:

1. Diagnosis within F20-F39 of ICD-10 (1989, draft version).
2. Current duration of illness less than two years.
3. No evidence or suspicion of organicity.

4. Receiving less than 100 mg chlorpromazine equivalents of neuroleptics in the last seven days prior to admission, and no injectable neuroleptics in the past one month.

5. In a stable physical condition, permitting examination for catatonic signs.

On day 1, a basic data sheet was filled for every patient that included the following socio-demographic and illness data: age, sex, marital status, background (rural or urban) and socioeconomic status; total duration since start of illness, age at onset, number of previous episodes and the duration of current disturbance. Each patient was then rated seven times over a period of three weeks on the Modified Rogers Scale (Lund et al, 1991), designed to rate both catatonic symptoms and extra-pyramidal symptoms non prejudicially, on days 1, 3, 5, 8, 11, 15 and 22. All treatment given to the patient, including emergency medication and ECT, was recorded by the treating team.

Analysis of data:

The eight catatonic signs finally taken up for analysis corresponded to those assessed by Abrams and Taylor (1976), with certain modifications. The guidelines for rating the signs used in the present study as per the Modified Rogers Scale are described in the Appendix. Advantage was taken of the 0-1-2 symptom severity discrimination of the Modified Rogers Scale, and a total score of 4 or more for the eight signs, on any of the seven rating days qualified a patient to be considered as catatonic. The two groups of patients thus obtained, catatonics and non-catatonics, were compared across the various socio-demographic and illness variables.

Chi square tests were done for each individual variable to test for statistical significance. An estimate of the duration of presence of catatonia during the current hospitalization could be made by adding (a) the period of days of successive presence of catatonia and (b) half of the period over which presence changed to absence. Based upon treatment modalities and response, the catatonic patients could be divided into three broad groups, (i) those who responded to ECTs (ii) those who responded without ECTs (iii) those who did not respond (with / without ECTs).

The frequency of catatonics and non-catatonics across different diagnostic subgroups were also calculated. The diagnoses received by the study sample could be divided into four broad groups:

- A. Mania and related diagnoses
- B. Depression and related diagnoses
- C. Schizophrenia - various subtypes
- D. Acute and Transient Psychotic Disorders.

The frequency of catatonic and non-catatonic patients across these four groups was tested for statistical significance.

RESULTS

Thirty two out of eighty six patients (37.2%) could be classified as falling in the catatonic group. Catatonic patients were significantly younger, had a significantly shorter total duration of illness, and had their first episode of illness in significantly greater numbers than the non-catatonics ($p < 0.05$). All other socio-demographic and illness variables showed no significant differences between the two groups (Table 1).

Duration of catatonia and response to treatment:

Most of the patients rated as catatonic had a short lasting catatonic syndrome. An estimate of the duration of catatonic signs in the individual patient could be made as described previously. It must be realized that the duration of catatonia would significantly depend upon the treatment decisions of the various treating teams, especially the decision to commence ECTs (triweekly, bilateral and unmodified).

Seventeen of the thirty two catatonic patients received ECTs (including one patient whose catatonic signs had resolved before ECT) during the course of the study period, while only seven of the fifty four non-catatonics did so. Fifteen of these seventeen patients responded to ECTs and one to

Table 1
Sociodemographic and illness variables

	Catatonics (n=32)	Non-catatonics (n=54)	Signif.
Present age			
≤ 30 years	25	30	$p \leq 0.05$
>30 years	7	24	
Sex			
Male	25	38	
Female	7	16	NS
Marital status			
Unmarried	12	13	
Married	20	41	NS
Domicile			
Rural	25	37	
Urban	7	17	NS
Socioeconomic status			
Low	22	37	
Middle	10	17	NS
High	0	1	
Total duration since illness started			
≤ 2 years	23	24	
2 to 5 years	5	14	$p \leq 0.05$
>5 years	4	16	
Age at onset			
<30 years	28	48	
≥ 30 years	4	14	NS
Number of previous episodes			
Nil	20	17	
one	4	13	$p \leq 0.05$
more than one	8	24	
Duration of current disturbance			
≤ 3 months	24	38	
3-6 months	3	8	NS
6-12 months	2	5	
>12 months	3	3	

Table 2
Treatment given and duration of catatonia

Subgroups of catatonics	Duration of catatonia		
	Mean	SD	Total
Responded to ECT	5.5	± 2.7	15
Responded without ECT	4.6	± 2.8	12
Did not respond	21.6	± 0.8	5

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Table 3
Diagnostic break up

Diagnostic group	Number of patients			Sum I
	Catatonics (%C)	Non Catatonics		
A. (F31.0/F.30.2/F31.1/ F31.2/F31.8)	16 (31.4%)	35		51
B. (F32.2/F31.3/ F33.3/F32.3)	2 (11.8%)	11		13
C. (F20.2/F20.3/F20.0)	8 (53.3%)	7		15
D. (F23.0)	6 (85.7%)	1		7
Total	32	54		86

non-ECT treatment. Eleven patients of the non-ECT groups and one of the ECT group were considered to have responded to non-ECT treatment. Five patients did not respond to the treatment given to them and this included one patient who had received ECTs. The duration of presence of catatonia in these three groups of patients as given in Table 2. Of the thirty two catatonic patients, twenty three could be rated as catatonic from day 1, while the remaining nine fulfilled the criteria for catatonia used in the present study by day 3.

Diagnostic break-up:

The catatonic / non-catatonic break-up amongst the four diagnostic groups is shown in Table 3. None of the patients had received a diagnosis of F22, Persistent Delusional Disorder or F25, Schizoaffective schizophrenia. The catatonics and non-catatonics differed significantly with regard to the distribution of the patients among the 4 diagnostic groups ($p < 0.001$). The maximum contribution to this difference was made by Group D, i.e. Acute and Transient Psychotic Disorder, polymorphic, without symptoms of schizophrenia (F23.0).

DISCUSSION

The diagnosis of catatonia as per recent classificatory systems (ICD-10, DSM-III-R) require that at least one of the catatonic signs should dominate the clinical picture. Abrams and Taylor (1976) had also considered the presence of one catatonic sign sufficient for the diagnosis of the catatonia syndrome, though 70% of their patients had demonstrated three or more signs. In their second

series of 123 consecutively admitted manic patients, 34 patients (28%) exhibited catatonic signs, and none of them showed less than two signs (Taylor & Abrams, 1977). In the absence of a consensus, various other authors have either proposed or used their own criteria for the diagnosis of catatonia (Barnes et al, 1986; Lohr & Wisniewski, 1987; Rosebush et al, 1990). In the present study, advantage was taken of the symptom severity discrimination of the Modified Rogers Scale, and a score of 4 required the minimum presence of at least two of the eight signs that had been extracted from the scale and had also been assessed by Abrams and Taylor (1976).

The incidence of catatonia in the present study was found to be quite high. It was often found that the catatonic signs would not dominate the clinical picture, as required by the classificatory criteria, yet definitely be present. As the ratings for patients were made on the basis of 15 minute examinations on scheduled rating days, it could not be ascertained whether the signs had been 'pronounced and prolonged over a period of hours' as required by Taylor and Abrams (1977), though even they have mentioned that they did not have to be sustained throughout the pre-treatment period.

It is contended that several of the catatonics in the present study showed short lasting state dependent signs as an intrinsic part of their psychiatric illness. This is further strengthened by the fact that twelve patients responded without ECTs as a mode of treatment, and their catatonic signs lasted for only 4.6 ± 2.8 days. Even in the group of patients whose catatonic signs responded to ECTs, they lasted only for 5.5 ± 2.7 days.

Across diagnostic subgroups, the incidence of catatonia among manic patients (31.4%) was comparable to the figure of 28% obtained by Taylor and Abrams (1977), yet the overall percentage of 37.2% was still higher, mainly because 8 out of the 15 schizophrenics (53%) in the sample, and 6 out of 7 Acute and Transient Psychotic Disorder (86%) patients fulfilled the criteria for the catatonia syndrome during the study period.

Presumably, the exclusion of patients with a current duration of illness of more than 2 years, excluded a primarily schizophrenic group. One of the reasons proposed for the declining incidence of catatonia is the availability of effective treatment before the patients reach the severe stuporous phase where catatonic features may occur (Magrinat et al, 1983). It is hypothesized that keeping the duration

of current illness less than 2 years as one of the inclusion criteria in this study excluded a large proportion of schizophrenia patients who might have had a longer duration of treatment history and lesser catatonic signs. Inclusion of these patients would have brought down the incidence in the schizophrenic group significantly.

In addition, the general factors responsible for the high overall incidence of catatonia, discussed previously, were also at play. Catatonic symptoms have been found to be commoner in developing countries, especially among first contact schizophrenics (Sartorius et al, 1986). It may be understood that a proportion of such patients would also be diagnosed as 'Acute and Transient Psychotic Disorder' as per current diagnostic practices. Hence it is not surprising that an increased incidence of catatonia was found in the present study among these two diagnostic groups.

More specifically, the Acute and Transient Psychotic Disorder patients of the present study showed 'polymorphic' features i.e., a rapidly changing and variable state as per ICD-10. This description would conform to that of catatonic excitement as originally described by Kraepelin. Kraepelin differentiated catatonia from manic depressive illness by the 'sudden and abrupt change of the states, and the shortness and irregularity of attacks and intervals....with more frequent recovery' (Magrinat et al, 1983). It is thus quite plausible that so many patients of this diagnostic group showed syndrome features of catatonia.

Socio-demographic and illness variables:

The finding of the present study that catatonic patients were significantly younger, had a shorter 'total' duration of illness and were significantly more from the first episode group of patients seem to be interlinked. Those who were having their first episode of illness would obviously be younger, and the total duration since their illness started would also be less. These findings are not supported by the study of Taylor and Abrams (1977) where the catatonics did not differ significantly from non-catatonics with respect to age or mean number of illness episodes. Other more contemporary studies are silent on this issue.

Gjessing (1938) has noted that the onset of illness among catatonics occur in most cases before the age of twenty. Wilcox (1986) mentions catatonia as a disease of the young. In the present study, 37.5% of the catatonics and 29.6% of the non-catatonics had

an age of onset of less than 20 years, and in 87.5 % of the catatonics, and 74% of the non-catatonics, the illness stated before 30 years of age. These figures did not reach statistical significance between the two groups. Further research is needed to throw light on this aspect of catatonia.

CONCLUSION

It is contended that catatonia has not become as rare as some experts opine. With changing diagnostic practices and the more frequent diagnosis of bipolar disorder in preference to schizophrenia, the frequency of patients actually exhibiting one or more catatonic features may actually be unchanged, since studies from 1922 to 1977 (Lange, 1922; Bonner & Kent, 1936; Taylor & Abrams, 1977) assessing the prevalence of catatonic features in affective disorder (particularly the bipolar form) report similar findings (Taylor, 1990). The review of the available literature suggests that catatonia may be more common in developing countries.

Short lasting transient catatonic signs seem to be quite common in acutely ill psychiatric patients and are ignored when seen in the framework of an affective or psychotic illness. Further research is needed to tease out the factors which lead to the prolongation or dominance of catatonia in certain cases and their relationship with neuroleptics.

REFERENCES

- Abrams, R. & Taylor, M.A. (1976) Catatonia: a prospective clinical study. *Archives of General Psychiatry*, 33, 579-581.
- Barnes, M.P., Saunders, M., Walls, T.J., Saunders, I. & Kirk, C.A. (1986) The syndrome of Karl Ludwig Kahibaum. *Journal of Neurology, Neurosurgery and Psychiatry*, 49, 991-996.
- Bonner, C.A. & Kent, G.H. (1936) Overlapping symptoms in catatonic excitement and manic excitement. *American Journal of Psychiatry*, 1311-1322.
- Fink, M. (1990) Is catatonia a primary indication for ECT? *Convulsive Therapy*, 6, 1-4.
- Fink, M. & Taylor, M.A. (1991) Catatonia: A separate category in DSM-IV? *Integrative Psychiatry*, 7, 1-5.
- Gjessing, R. (1938) Disturbances of somatic functions in catatonia with a periodic course and their compensation. *Journal of Mental Science*, 84, 608-621.

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- Johnson, J.** (1993) Catatonia: the tension insanity (lecture) *British Journal of Psychiatry*, 162, 733-738.
- Lange, J.** (1922) Catatonische Erscheinungen in Rahmen Manischer Erkrankungen. *Monographien aus dem Gasamgebiete der Neurologie and Psychiatric*, No.31. Berlin: Springer.
- Leff, J.** (1988) *Psychiatry around the globe*. London: Royal College of Psychiatrists.
- Lohr, J.B. & Wisniewski, A.A.** (1987) *Movement Disorders: A Neuropsychiatric Approach*. New York: The Guilford Press.
- Lund, C.E., Mortimer, A.M., Rogers, D. & McKenna, P.J.** (1991) Motor, volitional and behavioral disorders in schizophrenia. *British Journal of Psychiatry*, 158, 323-336.
- Magrinat, G., Danziger, J.A., Lorenzo, I.C. & Flemenbaum, A.** (1983) A reassessment of catatonia. *Comprehensive Psychiatry*, 24, 218-228.
- Mahendra, B.** (1981) Where have all the catatonics gone? *Psychological Medicine*, 11, 669-671.
- Rosebush, P.I., Hildebrand, A.M., Furlong, B.G. & Mazuret, M.F.** (1990) Catatonic syndrome in a general psychiatric inpatients population. Frequency, clinical presentation, and response to lorazepam. *Journal of Clinical Psychiatry*, 51, 357-362.
- Sartorius, N., Jablensky, A., Ernberg, G., Anker, M., Cooper, J.E. & Day, R.** (1986) Early manifestations and first contact incidence of schizophrenia in different cultures. *Psychological Medicine*, 16, 909-928.
- Taylor, M.A. & Abrams, R.** (1977) Catatonia: prevalence and importance in the manic phase of manic-depressive illness. *Archives of General Psychiatry*, 34, 1223-1225.
- Taylor, M.A.** (1990) Catatonia: A review of a behavioral neurologic syndrome. *Neuropsychiatry, Neuropsychology and Behavioral Neurology*, 3, 48-72.
- Wilcox, J.A. & Nasrallah, H.A.** (1986) Organic factors in catatonia. *British Journal of Psychiatry*, 149, 782-789.

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The Appendix for this article is given overleaf.