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A comparative study of "Idiopathic catatonia" with catatonia in schizophrenia

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ABSTRACT

Catatonia has been defined as a cluster of signs and occurs secondary to or as a subgroup of schizophrenia, mood disorders or organic syndrome. This study specifically examined the distinct variety of catatonia that did not meet any standard psychiatric diagnostic criteria on globally recognised psychiatric rating tools and compared the clinical features with the catatonia that occurred in association with a diagnosis of schizophrenia. The inpatients in a tertiary psychiatric ward in Ahmedabad, India, between 2002 and 2005 who presented with two or more catatonic signs present for more than 24 h period were assessed on Structured Clinical Interview for DSM IV tool. Those with catatonic signs that met diagnostic criteria for schizophrenia ($n = 21$) were compared, with those without any disorder called Idiopathic catatonia ($n = 13$), on measures of Bush Francis Catatonia Rating Scale (BFRCS), Brief Psychiatric Rating Scale (BPRS) and Scale for Assessment of Negative Symptoms (SANS). The scores on duration of illness ($U = 14.00$; $p < 0.001$) and mean BPRS ($t = 6.76$; df = 32; $p < 0.001$) were significantly higher in schizophrenia group. The Idiopathic group had significantly higher scores on mean total BFCRS ($t = -3.50$; df = 32; $p = 0.001$) and also on subscores of negativism ($p = 0.02$), waxy flexibility ($p = 0.02$), mitgehen ($p < 0.05$) and ambitendency ($p = 0.01$). The results indicate that the Idiopathic catatonia present early in their course and have fewer general psychopathologies; however have higher number and severity of catatonic signs. The study also supports the current concept that there does exists, a distinct variety of catatonia that probably has its own course and prognosis, which need further consideration and more studies to explore this.

1. Introduction

Catatonia was first described in 1874 by a German Psychiatrist, Karl Ludwig Kahlbaum in his monograph titled "Die Katatonie order Das Spannungsirresein" (Catatonia or tension Insanity) (Kahlbaum, 1973). He conceptualised catatonia as a motor syndrome characterised by lack of motion, speech, alternating with periods of excessive purposeful motor activity, rigidity, negativism, verbigeration, automatic obedience, posturing, grimacing and stereotypes. He also described that the syndrome generally had a periodic course and lethal outcome in a few.

Emil Kraepelin, later on adopted the ideas of Kahlbaum, though described catatonia as a subset of schizophrenia (Kraepelin, 1913; Kraepelin, 1919). Many researchers in recent years took his stance and this is believed to be the basis of catatonia being classified under schizophrenia, in DSM-III, DSM-III-R, DSM-IV (American Psychiatric Association, 1980, 1987, 1994) and ICD-10 (World Health Organisation, 1992).

Leonhard (1979) classified catatonia into systematic and unsystematic schizophrenia. He further classified simple systematic schizophrenia as parakinetic catatonia, affective catatonia, prokinetic catatonia, negativistic catatonia and the sluggish catatonia. The unsystematic schizophrenia included periodic catatonia characterised by episodic course with symptom free interval. Beckmann et al. (1996) study on 139 families with chronic DSM-III-R schizophrenia, indicated that periodic and systematic catatonia are valid subgroups of schizophrenia.

The Anglo-American approach to catatonia was influenced by Kraepelin. Catatonia was strictly defined as a subtype of schizophrenia in their classificatory system in the last three decades at least. These classifications did not allow for the finer distinctions as described by Leonhard, which may have enormous effect on management strategies with patients with catatonia.

At present, widely accepted definition of catatonia, is that it is a syndrome with presence of two or more signs also referred to as catatonic signs (DSM-IV, 1994). It occurs in patients with affective disorders (Abrams and Taylor, 1976; Braunig et al., 1998), neurological illness (Gelenberg, 1976; Gelenberg and Mandel,

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1977) and schizophrenia and Idiopathic (Barnes et al., 1986; Benegal et al., 1993).

Barnes et al., 1986 found that a significant minority had no identifiable cause and a high incidence of recurrence of catatonic episode with family history of similar signs. They labelled this group as Idiopathic recurrent or familial catatonia. They were reported to have an excellent prognosis but very few had progressive form. Benegal et al. (1993) in their study, found that about 40% of participants did not meet any diagnostic criteria on ICD-9 (World Health Organisation, 1977) and termed them 'Idiopathic catatonia'. These had shorter duration of illness and showed good response to Electro-Convulsive Therapy (ECT). Andrade (2000) described them in his study and coined them as Catatonia NOS. Pfuhlmann and Stöber (2001) in their review described catatonic schizophrenia, periodic catatonia and systematic catatonia.

The classificatory systems namely ICD-10 and DSM-IV are based on the presence of symptoms or signs specified for a length of time. The catatonia have been considered to occur secondary or in presence of a generalised medical or organic syndrome as well as common psychiatric illness such as psychosis and mood disorders. The catatonia that occurs in association with the organic physical condition has been classified as 'organic catatonic disorder' (F06.1) according to ICD-10 and 'catatonic disorder due to a medical condition' (code 293.89) in DSM-IV. As per ICD-10, a diagnosis of catatonic type of schizophrenia (F20.2) requires the presence of at least one of the catatonic features, for at least two weeks in addition to the general criteria for schizophrenia. The catatonic features include stupor, excitement, posturing, negativism, rigidity, waxy flexibility and automatic obedience. Similarly, in DSM-IV a diagnosis of 'catatonic schizophrenia' (code 295.20) is made in presence of at least two of the following: motor immobility, excessive motor activity, extreme negativism, peculiarities of voluntary movements, and echolalia/echopraxia.

Catatonia has also been found to be associated with mood disorders. ICD-10 specifies a term stupor which is clinically indistinguishable with the features of catatonic syndrome. The catatonia that is associated with the mood disorder can possibly be considered under either 'depressive episode with psychotic symptoms' (F32.3) or 'mania with psychotic symptoms' (F30.2). Unlike in ICD-10, there is no separate diagnostic category for catatonia due to mood disorders, but catatonia can be added as a specifier in mood disorders. Thus, for mood disorders, only stupor, which is an extreme catatonic sign, seems to have diagnostic implications, whereas for schizophrenia a broader range of signs are considered relevant.

Idiopathic catatonia can be defined as a cluster of symptoms and signs of catatonia that is not associated with or that do not meet the ICD-10 or DSM-IV diagnostic criteria for any psychiatric or organic disorder. The term Idiopathic catatonia used by the authors in this study is based on Benegal et al. (1993), who had used ICD-9 classification which then existed. The current classificatory systems are based on the clusters of symptoms and signs and one of the main critiques about such a system is that there can be two different conditions, but have few common characteristics and this then could lead to diagnostic uncertainty. Studies looking at the Idiopathic catatonia with other types of catatonia are in scarce from review of literature and thus emphasise the need for comparative studies of the Idiopathic group of catatonia with other catatonic syndromes. This study was aimed to explore various psychopathologies and to examine any variation in their clinical presentations in comparison with the catatonia that occurred in association with Schizophrenia.

2. Methods

The study was conducted between 2002 and 2005 in the Department of Psychiatry at Seth KM School of Post-Graduate Medicine and Research, Vadilal Sarabhai Hospital which is part of Smt. NHL Medical College. It is mainly a general hospital, which also has a Psychiatry Department with tertiary care facility and has inpatients facility for patients with mental illness. This inner city hospital services provide health care to urban and rural population in and around the city of Ahmedabad in western part of India. Any patient presenting with acute psychiatric symptoms routinely undergo a general physical examination and have routine blood investigations including full blood count, random blood sugar, liver function tests, blood urea and serum electrolytes. Also where an organic aetiology for their acute onset of psychiatric symptoms are suspected and patients presenting in stuporous state, are examined by Internal Medicine team to rule out organic aetiologies and patients undergo additional investigations including CT scan of the head.

Patients admitted to the psychiatric ward routinely have the investigations available at the time of initial review on the inpatient ward in the hospital. All the consecutive psychiatric inpatients between age 16 and 70 admitted with two or more catatonic signs, present for at least 24 h period were eligible to participate in the study. The patients were referred to the investigators by the practitioners in the Psychiatry Department after they were screened on Bush Francis Catatonia Screening Instrument (BFCSI) (Bush et al., 1996) and found to have at least two catatonic signs present for at least 24 h period. The participants were subsequently examined by an investigator (KKR) and Structured Clinical Interview for DSM-IV (SCID-CV) was conducted with participants and their informants (Michael et al., 1996). The patients having mood disorders on the SCID-CV were excluded from the study and this was done to avoid having any sample of catatonia that was associated with mood disorders. The patients with a diagnosis of schizophrenia and having catatonic signs as well as those with catatonia, but without any associated psychiatric diagnosis on the SCID-CV were included and they participated in the study. Subjects with no reliable informant, with history of substance abuse and any underlying organic disorders evident from investigations were excluded from the study.

The study had the necessary approval from the hospital ethics governing body before commencement and was adherent to the local ethics guidelines on consent. A thirty-four (34) eligible participants were then separated into two groups; one group met DSM-IV criteria for a diagnosis of schizophrenia (schizophrenia group, $n = 23$) and another group did not meet any of the diagnostic categories on the SCID-CV (Idiopathic group, $n = 13$).

The SCID-CV is a structured interview and a validated diagnostic tool based on DSM-IV (Ventura et al., 1998). In this study this interview schedule was used either to diagnose or exclude psychiatric disorders. The SCID-CV is used mainly for diagnosing Axis I Disorders of the DSM-IV. The authors have used clinical version of the SCID. It covers the mood disorder, psychotic disorders, substance use disorders, anxiety disorders, somatoform disorders, eating disorders and adjustment disorders. It is also supplemented with detailed structured interview based on DSM-IV. Every diagnosis was further discussed subsequently with a Senior Consultant Psychiatrist and the study supervisor (RCM).

Three commonly used instruments namely the Bush Francis Catatonia Rating scale (BFCRS) (Bush et al., 1996), Brief Psychiatric Rating Scale (BPRS) (Overall and Gorham, 1962) and Scale for Assessment of Negative Symptoms (SANS) (Andreasen, 1989) were administered to all the eligible participants ($n = 34$).

2.1. Instruments

2.1.1. Bush Francis Catatonia Rating Scale

The BFCRS is a 23 items objective rating scale. Each item listed in the scale is an individual catatonic sign. The first 14 items on BFCRS is used as Bush Francis Catatonia Screening Instrument