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Catatonia in Psychotic Patients: Clinical Features and Treatment Response

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Abstract

We report clinical features and treatment response in 25 patients with catatonia admitted to an inpatient psychiatric unit specializing in psychotic disorders. ECT, benzodiazepines, and clozapine had beneficial effects on catatonic features, while typical antipsychotics resulted in clinical worsening.

Keywords

Catatonia; Psychosis; Benzodiazepines; ECT; Clozapine

Introduction

Catatonia is a severe clinical syndrome, first described by Karl Kahlbaum in 1874, characterized by a cluster of signs and symptoms including mutism, stupor/immobility, staring, posturing, negativism, withdrawal, rigidity, and autonomic abnormalities.[1,2,3] Recent literature suggests a 10-15% prevalence of catatonia among acute psychiatric inpatients.[4,5] While classic cases of catatonia are easily recognized, subtler signs and symptoms of catatonia are more prevalent and their recognition is more challenging for clinicians.[6,7] Catatonic presentations are often overlooked in the context of psychotic and/or mood episodes but the treatment for catatonia can be very different than that for psychotic and mood disorders.[5,7,8] Since most patients present with catatonia and a mixture of psychotic/mood symptoms it is critical to treat each entity without adversely affecting the other. In this report, we examined the clinical characteristics and treatment response for patients with catatonia admitted to a psychiatric inpatient unit specializing in psychotic disorders, including mood disorders with psychotic features.

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Methodology

We conducted a retrospective chart review of 25 patients admitted to McLean Hospital's Schizophrenia and Bipolar Disorder Inpatient Unit from July 2004 to July 2009 and diagnosed with catatonia based on SCID criteria by the treating psychiatrists. We examined demographic features, psychiatric symptoms and catatonic features in this cohort. The investigators knew these patients during their clinical stay, and one clinician carried out a retrospective rating of the most severe catatonic signs and symptoms during the admission using the Bush-Francis Catatonia Rating Scale (BFCRS).[2] We examined details of the clinical course and patterns of response to various treatments. We reviewed response to medications throughout the patients' hospitalization by correlating medication administration records to clinical documentation.

Results

Demographics

The group's median age was 26 (range 18-60) and included 15 male and 10 female patients. Nine patients were previously diagnosed with bipolar disorder, eight with psychosis not otherwise specified (NOS), one with a depressive episode and anxiety disorder, four with schizophrenia, and two patients had no prior psychiatric history. 10 patients had episodes of catatonia reported in previous inpatient admissions. Six patients had a significant substance abuse history but only one was abusing opiates and methamphetamines prior to this admission. Five patients had a family history of bipolar disorder noted in the chart, five of schizophrenia, six of depression, and four of substance abuse, while 13 patients had no documented family psychiatric history.

Clinical characteristics

All patients had formal medical evaluations by an internist to rule out underlying medical conditions that may contribute to their psychiatric symptoms. The medical work-ups were consistently unremarkable. Ten patients were also evaluated by a neurologist, who found no neurologic abnormalities contributing to catatonia. 15 patients had brain MRIs, eight patients had head CT scans and eight had EEGs, all with no remarkable findings.

All patient records were evaluated by the same clinician and rated for presence and severity of catatonic symptoms using the BFCRS.[2] The frequency of catatonic symptoms, in order of declining frequency, were as follows: immobility/stupor 24/25, mutism 23/25, staring 22/25, posturing/catalepsy 17/25, withdrawal 16/25, stereotypy and ambitendency 12/25, mannerism, waxy flexibility and negativism 10/25, rigidity and grimacing 9/25, verbigeration and automatic obedience 7/25, gegenhalten 6/25, perseveration 5/25, autonomic instability 4/25, echophenomena and excitement 3/25, impulsivity, combativeness and mitgehen 2/25, grasp reflex 0/25.

18 patients with higher BFCRS scores (12-34) were rated as high in severity for withdrawal (including minimal intake of food), immobility, stupor, staring, and posturing, resulting in inability to care for oneself. Seven patients with lower scores (6-11) presented with immobility, mutism, and staring. While their catatonic symptoms were not rated as severe according to the symptom scale, these symptoms significantly impaired the patients' ability to care for themselves. Among the three patients with the highest BFCRS scores (34,30 and 29), two vacillated from excitation marked by combativeness to stupor characterized by negativism and withdrawal, with little intake of food and water. The third progressed to severe immobility, muscular rigidity, catalepsy, mutism, and autonomic instability, and was transferred to a general hospital for emergency medical care and to rule out possible neuroleptic malignant syndrome.

Treatment response

We reviewed medication administration records and correlated the clinical response to medications. Though the effects of particular treatments were often dramatic and obvious, we could not definitively attribute a clinical response to a particular treatment since most of the patients were simultaneously on multiple treatments. Nonetheless, we examined the timing of initiation, dosage change and discontinuation of various treatments, and categorized the treatment response patterns in the following categories: definitely beneficial, likely beneficial, neutral, likely detrimental and definitely detrimental (Table 1).

12 patients received electroconvulsive therapy (ECT), with 10 receiving bilateral electrode placement. ECT led to dramatic improvement in most cases, with rapid response seen within 1-5 treatments. The response pattern showed that 10 (83%) had definitely beneficial effects and 2 (17%) had likely beneficial effects, resulting in effective treatment of catatonic symptoms with a mean of 10 treatments. Six patients treated with ECT were noted to have cognitive/memory impairment during treatment, but these resolved by time of discharge.

All 25 patients were treated with benzodiazepines. High-dose lorazepam (up to 16mg/day) was rated as definitely beneficial for 28% of patients. The mean response time for resolving catatonia in these patients was nine days. 68% had likely beneficial response to lorazepam while one did not show any response. The majority of patients required maintenance on lorazepam throughout their hospital course, including through their ECT course. While most patients had a robust response to lorazepam, some could not tolerate the higher doses or the effects were not sustained, requiring addition of ECT or clozapine. 70% of patients were on lorazepam at time of discharge.

Seven patients were treated with clozapine, and it was rated as definitely beneficial for six of the patients and likely beneficial for one. In all cases, clozapine was initiated following unsuccessful trials of lorazepam and other atypical antipsychotic medications. While clozapine was effective, it required slow titration and close monitoring, and the response time was slower, with a mean 7-week duration for resolution of symptoms.

Though clozapine was routinely beneficial, this characteristic was not shared by other antipsychotic medications. Olanzapine and quetiapine showed mixed results while risperidone and aripiprazole tended to have more detrimental effects. Patients treated with typical antipsychotics routinely showed detrimental effects. The adverse effects noted with these antipsychotics included worsening of catatonic symptoms, increasing confusion, agitation and restlessness. This pattern of detrimental effects with typical antipsychotics is similar to the treatment response patterns we have reported in patients with delirious mania.[9] Twelve of the patients were also treated with mood stabilizers (lithium, valproate, lamotrigine), and all were likely beneficial during the treatment of these patients.

Patients with catatonia often presented with intense fears, perseverations and delusional preoccupations. In 60% of our patients, we found that the treatment of catatonia was accompanied by resolution of psychotic symptoms as well, while 40% of these patients still had psychotic symptoms after resolution of catatonia, according to clinical notes.

Discussion

Recognition and proper treatment of catatonia is crucial, especially in patients with psychotic disorders, since effective treatments for catatonia differ from treatment regimens for psychosis. Catatonic symptoms can often be misunderstood as bizarre psychotic behavior and hence not recognized and treated. Historically, catatonia has been classified as a subtype of schizophrenia but there is convincing evidence that catatonia is a syndrome that

is not limited to patients with schizophrenia.[10,11] In our sample, only four out of the 25 subjects carried a diagnosis of schizophrenia. Moreover, improper treatment with antipsychotics can lead to clinical worsening and transition to lethal catatonia/neuroleptic malignant syndrome. In an effort to distinguish catatonic from psychotic presentations and to delineate treatment responses specific to the former, we examined symptoms and treatment response in patients with catatonia in an inpatient unit specializing in psychotic disorders.

We have delineated the most prevalent symptoms that should raise suspicions for a catatonic syndrome. We also report patterns of response to different treatment modalities. Benzodiazepines at high doses and ECT have routinely beneficial effects in treating catatonia, as has been described by others in the literature.[5,8] For patients with malignant catatonia, investigations have shown that daily, bilateral ECT during the first week is most effective.[4,8] We also note that no significant difference in short-term outcome was observed between ECT, sham ECT and nonconvulsive stimulation in catatonia associated with chronic schizophrenia.[12,13]

In our study, we found that effective treatment of catatonia resulted in resolution of psychosis in over half of the patients. This interesting observation is in line with a previous study reporting 32% of patients had resolution of psychotic symptoms once catatonia was effectively treated.[14] This effect may be explained by the collateral impact of treatments directed at catatonia on psychotic symptoms, or by a worsening in psychotic symptoms by catatonia, which improves secondarily as catatonia is treated.

There is less clarity on the role played by antipsychotic medications in patients with catatonia.[14] This is an important issue in treating patients presenting with both psychosis and catatonia. We found that clozapine stood out uniquely as an antipsychotic agent that was uniformly beneficial. However, this characteristic was not shared by other typical or atypical antipsychotic medications. We note that detrimental effects were more prevalent with antipsychotics that have more “typical” D2-antagonism. This should guide clinicians to have a lower threshold in using clozapine in psychotic patients with catatonia and in avoiding typical antipsychotic medications.

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Table 1

Pattern of treatment response

Treatment	No. of cases	Observations	Response Patterns
Benzodiazepines	25	High doses (16mg/day) tolerated without sedation. Response in days to weeks.	7 definitely, 15 likely beneficial; 3 neutral
ECT	12	Rapid Response within 1-5 treatments. Bilateral electrode placement. Memory impairment in 50% that resolved.	10 definitely, 2 likely beneficial
Antipsychotics			
Clozapine	7	Good overall improvement. Requires slow titration.	6 definitely, 1 likely beneficial
Olanzapine	9	Some benefit but not consistent. Restlessness in patients. Some worsening of catatonia symptoms.	4 definitely beneficial 2 neutral; 3 likely detrimental
Quetiapine	5	Helpful with anxiety and insomnia. Some confusion in patients. Some worsening of catatonia symptoms.	3 definitely beneficial 2 likely detrimental
Risperidone	6	Restlessness and EPS observed.	3 neutral 3 likely detrimental
Aripiprazole	3	Some worsening of catatonia symptoms.	2 neutral 1 likely detrimental
Typical	5	Worsening of catatonia symptoms. Some rigidity and restlessness.	2 neutral 3 likely detrimental
Mood Stabilizers			
Lithium	4	Overall helpful.	4 likely beneficial
Valproate	5	Overall helpful.	4 likely beneficial 1 likely detrimental
Lamotrigine	3	Overall helpful.	2 likely beneficial 1 neutral
Antidepressants	4		3 neutral 1 likely detrimental