Viral Meningoencephalitis masquerading as functional catatonia – Case Report

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ABSTRACT

Catatonia, though rare in west, is not relatively uncommon condition in developing countries and often presents a diagnostic dilemma. With the present case report of a young girl presenting with catatonic syndrome where etiology turned out to be viral meningoencephalitis rather than depressive disorder as was thought initially due to the evidence of a temporally associated stressor and depressive symptomatology; we would like to bring out certain important issues: a) the presence of obvious functional psychiatric causes of catatonia should not deter clinicians from considering an organic etiology. b) Meningoencephalitis should be added to the list of differential diagnoses of causes of catatonic syndrome and CSF analysis be made indispensable in organic work up of catatonia. c) Poor response to Lorazepam in catatonics should also alert clinicians to focus their attention towards organicity.

Key words: Catatonia, lorazepam, Organic catatonia, viral meningoencephalitis

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INTRODUCTION

Catatonia, though rare in west, is not relatively uncommon in developing countries and often presents a diagnostic dilemma. Catatonia is a neuropsychiatric condition characterized by apparent unresponsiveness to external stimuli in a person who is apparently awake and usually encompasses more than two dozen signs and symptoms of psychomotor abnormalities (both characteristic as well as non specific) like mutism, waxy flexibility, negativism,

ambitendency, rigidity, posturing, staring, verbigeration, mannerism, stereotypy, grimacing, echolalia/ echopraxia , stupor/ excitement etc.

In the International Statistical Classification of Diseases and Related Health Problems (ICD-10) and DSM IV classification systems, catatonia is classified as a subtype of schizophrenia.[1,2] However catatonia is more frequently associated with mood disorders than schizophrenia. It is also associated with organic conditions though less frequently.[3] The proportion in which catatonia occurs in a variety of psychiatric and medical / neurological disorders is estimated to around 50% in mood disorders, 20% in schizophrenia and 20% in primary medical or neurologic diseases.

Rosebush *et al*. reported that two-thirds of catatonics in an adult psychiatric ward had associated medical illness.[4] There have been reports of catatonia caused by medical conditions like CNS tumors, epilepsy, encephalitis, carbon monoxide poisoning, hypo and hyperthyroidism, hypo and hyperadrenalism, and vitamin B_{12} deficiency etc.[5]

It is very important to establish the etiopathogenesis of the catatonic syndrome, which is required for symptomatic treatment as well for the underlying psychiatric, medical, or neurologic disorder. Despite its relatively infrequent association with medical conditions, organic etiology must be considered in every patient with catatonic signs.

We describe the case of a young female presenting with catatonic syndrome with an obvious psychiatric cause where etiology turned out to be an organic condition rather than the functional one.

CASE REPORT

A 16 year old unmarried girl hailing from rural background of Haryana presented to psychiatry emergency room in June 2015 with the symptoms characterized by mutism, staring, posturing, withdrawn behaviour, neglect of self care and poor oral intake for past 3 days.

During detailed evaluation family members reported history of crying spells, low mood, decreased interaction with family members, loss of interest in previously enjoyable activities, sleep disturbance, decreased appetite, feelings of guilt,

worrisome pessimistic thoughts concerning her future for past one month prior this acute deterioration. She had developed these symptoms after she was caught using unfair means during board examination and consequent debarring from taking exams for next one year. There was no history of fever, vomiting, headache, loss of consciousness, seizure, fecal or urinary incontinence. She had no past or family history of psychiatric or significant physical illness.

Mental status examination revealed a perplexed young female with marked psychomotor retardation, mutism, active negativism, waxy flexibility, rigidity and restricted affect. There was no echolalia, echopraxia, mannerism, stereotypy, automatic obedience or excitement. No psychotic features like delusions or hallucinations could be elicited from history or examination. Physical examination revealed temperature 99.6 degree Fahrenheit, labile blood pressure ranging from 102- 160/ 56 -98 mmHg, Pulse rate ranging from 66 to 124 per minute and respiratory rate of 17 breaths per minute. Remaining general and systemic physical examination was unremarkable.

Her metabolic and biochemical parameters such as complete blood count, liver function test, kidney function test, blood sugar and serum electrolytes done were within normal range. CT Head and ECG showed no significant abnormality.

She was admitted in psychiatry ward with a diagnosis of catatonia secondary to depressive disorder. The score on Busch Francis Catatonia Rating scale (BFCRS) at the time of presentation was 24. Injectable Lorazepam 8mg/day was started to begin with. But she failed to show any response on trial of Lorazepam. ECT was planned in view of failed trial of Lorazepam. On 3rd day of admission she developed fever (temperature 100.2 degree F) and doubtful neck rigidity (owing to generalized stiffness and uncooperativeness). Physician opinion was sought in view of emergence of these fresh symptoms and as a part of pre anesthetic checkup required before ECT. CSF analysis was advised which revealed clear CSF with TLC count – 60/mm^3 with 100% lymphocytes and raised CSF protein (104 mg/dl), normal CSF sugar – 60 mg/dl with random blood glucose 88 mg/dl and normal Adenosine deaminase suggestive of

viral meningoencephalitis. Serological test was not done owing to financial unafforadability as reported by family.

Following this, the diagnosis was revised to catatonia induced by viral meningoencepahlitis and she was transferred to medicine ward for further management. Injectable Lorazepam was stopped and Injection Acyclovir 500 mg TDS IV was initiated and continued for 14 days. After 2 days of starting treatment she showed significant improvement in terms of resolution of fever and catatonic symptoms like waxy flexibility, posturing and rigidity initially and gradual remission of remaining symptoms. She had recovered completely at the end of 2 weeks and was discharged with the final diagnosis of catatonia secondary to viral meningoencephalitis.

DISCUSSION

Catatonia is one of the most dramatic psychiatric presentations, but is becoming increasingly rare particularly in the Western world. It has been suggested that catatonia is under-recognized and under-diagnosed[6] though it is relatively easy to establish a diagnosis of catatonic syndrome particularly when a set of classical signs and symptoms are present as were in our case. The presence of characteristic signs and symptoms like mutism, posturing, waxy flexibility, negativism, withdrawal and autonomic abnormality in our case helped us establish a diagnosis of catatonia with relative ease and confidence.

The second question that arises immediately after the diagnosis of catatonia is established pertains to its etiology whether the catatonia being dealt with is secondary to functional psychiatric condition (mood disorder, schizophrenia or hysteria etc.) or organic in origin (occurring in a variety of medical or neurological conditions).

In the current case, psychiatrists kept the possibility of depressive disorder as the likely cause of catatonia probably due to the clear cut evidence of a temporally associated stressor (embarrassment, humiliation and break in studies imposed after being caught using unfair means in examination hall) and presence of depressive symptoms (sadness of mood, crying spells, anhedonia, sleep and appetite disturbance, guilt and pessimistic thoughts concerning future) for a period of around

one month qualifying for a diagnosis of moderate depressive episode as per ICD -10.

The presence of fever in this case was the only initial pointer towards organic condition. But since fever was unaccompanied by other signs and symptoms that usually explain a medical condition like headache, vomiting, loss of consciousness, seizure, rashes, petechiae, diarrhea, chills or rigors etc and moreover autonomic abnormality (that includes abnormality of temperature) is one of the signs of catatonia itself plus evidence generated by normal metabolic, biochemical and radiological investigations together with presence of an explainable psychiatric cause diverted the treating psychiatrists from considering organic basis of etiology at the first instance. Neck rigidity was another sign but it was doubtful owing to generalized stiffness and uncooperativeness usually seen in catatonics.

Third important issue is the treatment of catatonia. Benzodiazepines particularly Lorazepam are the drug of choice in catatonia with evidence supporting its usefulness in both organic as well as functional catatonia[7].

However in this case, patient did not show any response to a trial of Lorazepam. Poor response to lorazepam should have been picked as another indicator towards underlying organic etiology as has already been reported previously by Swartz *et al;* in a case series that catatonia due to neurologic conditions does not respond as reliably to Lorazepam or ECT as functional catatonia does[8].

ECT is the next best option when benzodiazepines fail independent of the etiology of catatonia. Subsequent rise in temperature during ward stay and need to get preanaesthetic clearance prior to ECT demanded physician opinion in our case. Physician demanded a CSF examination in view of fever and neck rigidity which revealed an almost definite picture suggestive of viral meningoencephalitis characterized by clear CSF, raised leucocyte count (but < 100/µl) with 100% lymphocytes, slightly raised proteins and normal CSF glucose and negative adenosine deaminase test. Since family expressed inability to afford serological testing due to

financial constraints. Injectable antiviral Acyclovir was started empirically and remarkable response was seen following the institution of this treatment.

Although traditionally linked to schizophrenia and mood disorders and less frequently with medical conditions, catatonic patients should be carefully looked for general medical conditions. Even the presence of temporally associated stressor and positive evidence for apparent functional psychiatric cause should not deter clinicians from thorough exploration of organic etiology. Meningoencephalitis should be added to the list of differential diagnosis and CSF analysis is included as an indispensable investigation in the organic work up of catatonia.

CONCLUSION

The search for etiology of catatonia should invariably include the probability of underlying medical disorder even if the functional causes like mood disorders or schizophrenia seem obvious. The authors emphasize the need for a diligent investigation of all possible causes of sudden-onset catatonic syndrome and recommend that viral meningoencephalitis be added to the list of differential diagnoses and CSF analysis be made indispensable in organic work up of catatonia. Poor response to Lorazepam should also alert clinicians to focus their attention towards organicity.

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