Catatonia is a clinical syndrome characterized by a variety of psychomotor abnormalities that range from retardation to excitement. Catatonic states occur in the context of a wide variety of both psychiatric and medical conditions. This syndrome is a significant clinical problem and in certain situations it represents a psychiatric and even vital emergency because it is associated with dehydration, intercurrent infection, and pulmonary embolism. [1]

Catatonia occurs in various proportions in the context of a wide spectrum of psychiatric, medical and neurologic disorders:

- 50% in mood disorders
- 20% in schizophrenia
- 20% in primary medical or neurologic disease
- 8% in BZD withdrawal
- 2% in other psychoses

Rosebush 1990 determines one possible unifying mechanism between catatonic states and the disparate array of conditions reported in association with it, namely the experience of overwhelming anxiety and fear of death during catatonia.

It is very important to establish the etiopathogeny of the catatonic syndrome, which is absolutely necessary in administering the combined treatment for both the clinical symptomatology and the underlying psychiatric, medical, or neurologic disorder.


In 1990 Rosebush et al. [4] prospectively screened 140 admissions to an inpatient psychiatric unit for catatonia of the retarded type, with catatonic excitement or an intermixture of the two. They used treatment with lorazepam (1-2 mg orally or intramuscularly), 80% of the episodes being resolved fully and rapidly.

In 2001 Ungvari et al. [5] conducted a randomized double-blind, placebo-controlled, crossover study of lorazepam in patients with chronic schizophrenia and chronic catatonia. They observed that a response rate of only 20%-30% in catatonic patients with schizophrenia in contrast to the 83% rate of response in catatonic patients with other underlying diagnoses. They mention that the poor responsiveness to BZDs of catatonic symptoms in patients with schizophrenia may be related to a number of factors:

- The refractory chronicity of the symptomatology in schizophrenia, including, in many cases, the catatonic features themselves;
- Relative absence of anxiety in these patients.

There have been reported two factors that appeared to predict response: the presence of extreme anxiety during the episode and the clinical association of immobility, mutism, and withdrawal with refusal to eat or drink.

Another clinical study performed on catatonic patients by Yassa et al. [6] in 1990 showed the benefits of lorazepam treatment in the dramatic resolution of their catatonic states (within hours of receiving BZD treatment) and in maintaining the positive effects through association with an antipsychotic.

Lorazepam is administered intramuscularly, starting with a dose of 2 mg. If there is no response after 3 hours, the same dosage should be repeated, and again a 3-hour period should be allowed to elapse. If, once again, there is no response, a third injection may be given. Duration of benzodiazepine treatment should be prolonged even after the resolution of the catatonic state, until treatment of the primary disorder has been instituted. Failure to continue with benzodiazepines puts the patient at high risk of relapse into catatonia, which raises the question of whether catatonia should be considered a diagnosis in its own right and not simply a manifestation of another underlying disorder.

In a literature review of 72 episodes of catatonia treated with benzodiazepines, a response rate of almost 80% was found (Hawkins et al. 1995) [7]. Since 1992 benzodiazepines represent a first-line treatment in catatonia, because they offer several advantages: a wide margin of safety, a rapid response, and they are easily administered. Other treatments include atypical antipsychotics, antiglutamatergic drugs, lithium. Lorazepam and other GABA-A promoters (benzodiazepines, zolpidem) increase GABA activity as their mechanism of action.
Carroll and colleagues [8] studied 49 cases that were rated with the Bush-Francis Rating Scale between 1995 and 2005. 10 patients had schizophrenia with catatonic features, 4 patients bipolar and unipolar mood disorders, 10 patients had catatonia due to a general medical condition. Treatment included: atypical antipsychotics, clozapine, lorazepam, bro-mocriptine, memantine. Some improvement in catatonia and function occurred with medication treatment in 16 of the 49 cases. The efficacy of benzodiazepines oral lorazepam or intramuscular clonazepam in acute catatonia in schizophrenia was seen in 40 of 58 episodes (69%) as the first line study of Carroll and Lee. The response rate in chronic catatonia in schizophrenia with benzodiazepines was much lower: response rate versus response in acute catatonia and they augmented amantadine, selegeline, lithium, and SGAs.

Northoff et al. (9) used intravenous amantadine to successfully treat acute catatonia. Other authors reported that patients became floridly psychotic and the use of neuroleptic medication was required.

Other pharmacologic therapy for catatonia includes intravenous sodium amobarbital that acts directly on the GABA-A receptor which has a component that binds barbiturates. Unlike benzodiazepines, barbiturates carry a higher risk of side effects because they act directly on the GABA-A receptor and can therefore have a greater sedative-hypnotic effect as well as a higher potential for respiratory depression.

Lorazepam and other GABA-A promoters (benzodiazepines, zolpidem) increase GABA activity as their mechanism of action. Anticonvulsants may be helpful by increasing activity at GABA or modest anti-glutaminergic effects with some reports of benefit from carbamazepine and valproic acid. In neuroleptic-induced catatonia an anticholinergic might be helpful, suggesting a role for the cholinergic system in catatonia. Clozapine and other SGAs have been reported to improve catatonia in psychosis.

Based on clinical evidence, benzodiazepines are highly effective and safe as the first-line treatment of catatonia, particularly in treating the regarded type of acute catatonia regardless of etiology, but may be less effective in patients with chronic catatonia associated with schizophrenia.

Depending on the underlying diagnoses, several therapeutic alternatives have been recommended [8]:

1. Combined treatment with Quetiapine (25-100 mg/day) and Lorazepam (5 mg/day) has ameliorated catatonic symptoms such as mutism or aki-nesia, and has improved stereotyped movements in acute catatonia associated with schizophrenia.

2. Combining lithium (400-600 mg/day) with the above mentioned treatment proved to be effective in treating catatonia associated with bipolar disorder.

3. Associated treatment with sertraline 100 mg/day and thioridazine 100 mg/day helped remitting catatonic symptoms (waxy flexibility, bizarre attitudes) in patients with depressive disorder.

4. Memantine (5 mg/day), lorazepam (5 mg/day) and quetiapine (200-300 mg/day) had positive effects on patients with catatonia that occurred in the context of a medical disorder.

References


