RESOLUTION OF SYMPTOMS IN NMS: A CASE REPORT
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ABSTRACT

Although neuroleptic malignant syndrome manifests consistently with hyperthermia, muscle rigidity, altered mental status, and autonomic instability, heterogeneity exists in the onset, course, laboratory findings, response to treatment and pattern of resolution. Comorbid physical conditions tend to confuse the picture. We report a case of NMS with one such presentation.

Key Words: Neuroleptic malignant syndrome, resolution, comorbidity

Neuroleptic malignant syndrome (NMS) is a rare serious complication of neuroleptic therapy (Addonizio and Susman, 1991). The criteria for diagnosing NMS have ranged from the rigid ones proposed by Levenson (1985) to the more flexible ones by Addonizio and Susman (1991), Caroff and Mann (1988) and to one of the most liberal suggested by DSM-IV (APA, 1994), where along with severe muscle rigidity, elevated temperature, two out of a combined list of 10 clinical features and investigative abnormalities, have to be present for a diagnosis of NMS. Other causes to account for the clinical picture have to be ruled out.

Several risk factors have been proposed, which along with neuroleptic exposure, predisposes an individual to NMS. Besides supportive therapy and discontinuation of antipsychotics, successful treatment has been reported with drugs like Amantadine, Dantrolene sodium and Bromocriptine mesylate (Grebe, 1995).

There is however no consensus on the course and pattern of resolution of symptoms.

CASE REPORT

Miss U, a 32 year old unmarried lady was brought to this hospital with 3 days history of fever, poor self care, restlessness, and disorientation.

For 2 months prior to above, patient was expressing sad mood, fearfulness, poor sleep and appetite. Around 30th day of her illness she was shown to a local psychiatrist, who prescribed her tab. haloperidol 5mg once a day, tab. alprazolam 0.25mg 1/2-0-1, tab. trihexiphenidyl 2mg twice daily. Patients apparently did not show any improvement, and 4 days later was hospitalised, and the dose of haloperidol increased. After a stay of 7 days in the hospital, patients was discharged on tab. haloperidol 5mg thrice daily, tab. trihexiphenidyl 2mg thrice daily and tab. alprazolam 0.25 mg 1/2 tab. twice daily and 1tab in evening.

Past history was suggestive of depressive episodes, 10 and 15 years ago. Family history of depressive illness in younger brother. Premorbidly patient was scholastically backward.

At admission, patient was febrile, BP 140/100 mm Hg, pulse 98/min, regular, normal volume, cog wheel rigidity and tremors in the out stretched hands were present. Mental status examination showed poor attention span, disorientation and an anxious affect.

Laboratory investigations: ESR, WBC total count, differential count, urine routine examinations, renal parameters, electrolytes,
and liver function tests were within normal limits. Blood smear for malarial parasites was negative. CPK was 2087 IU/L and LDH 489 IU/L.

Patient was started on tab. lorazepam 1mg twice daily, on the day of admission and increased gradually up to 2 mg twice daily over the stay. Paracetamol was administered whenever required. The patient continued to be febrile (temp 101°F-104°F). Rigidity assumed a lead pipe character and disorientation became prominent. Fluctuation in B.P., pulse, respiratory rate and increased sweating were observed. Patient was started on tab. bromocriptine 5mg 1/2 twice daily, increased up to 5mg thrice daily over the course of illness.

Autonomic instability, muscle rigidity and higher mental functions showed remarkable improvement after 5-6 days of bromocriptine therapy, but she continued to be febrile. CPK levels dropped to 1161 IU/L after 3 days and to 70 IU/L after 11 days of starting bromocriptine.

A medical consultation was sought on the 10th day as the fever continued to be high. Despite repeated blood smear examination being negative, an empirical trial of pyrimethamine and sulphadoxine was given. Fever persisted. Blood culture, urine culture and widal test did not reveal any abnormalities.

Ciprofloxacin was started empirically, and within 3 days the patient became afebrile. Patient was afebrile, had no muscle rigidity or tremors at the time of discharge.

DISCUSSION

Several criteria have been proposed for NMS (Levenson, 1985; Addonizio and Susman, 1991; DSM-IV, 1994). Our patient who had confusion, severe rigidity, autonomic instability, raised CPK and with a history of neuroleptic exposure would definitely be considered one of them. Over and above, the patient had a few factors for developing NMS, viz. exposure to haloperidol—a high potency neuroleptic (Caroff, 1980), a recent hike of the same, affective disorder, mental retardation (Alexander et al., 1996).

Was the course of illness in this case typical of NMS? Although a potentially lethal condition, resolution of symptoms of NMS in cases untreated with dopaminergic agonists or dantrolene is not completely unknown. The mean recovery time in 65 cases, according to Caroff and Mann (1988) was 9.6±9.1 days. Although bromocriptine has been reported to reduce the symptoms of NMS within 6 hours of first dose (Dhib-Jhalbut et al., 1985; Zubenko and Pope, 1983), in the 14 cases of NMS reported by Itoh et al. (1977) fever lasted 4-17 days and rigidity persisted for several weeks after patients had become afebrile. On the other hand, a discrepancy between temperature course and CPK level has also been reported (Dhib-Jalbut et al. 1987). The exact pattern of symptom resolution in NMS with bromocriptine is unknown and therefore this case is not all that unusual. No acute or chronic physical conditions to account for the fever could be detected by the physician. A therapeutic trial of pyrimethamine + sulphadoxine proved unsuccessful. Though the therapeutic trial of ciprofloxacin was seemingly successful, one should keep in mind that NMS has its own course and is known to remit without treatment also.

We propose that there should be no stone unturned in the quest for a comorbid condition alongside NMS and that systematic reports be made available regarding symptom resolution in NMS with various treatment modalities for better management.

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