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Case Report

Leprosy with Psychosis and Neuroleptic Malignant Syndrome : A case report

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Leprosy has been associated with increased prevalence of psychiatric comorbidities. Acute Polymorphic Psychotic Disorder (APPD) is one of severe psychiatric disorders which is characterized by delusions, hallucinations and lack of insight. Rarely, treatment of APPD with antipsychotics leads to development of Neuroleptic Malignant Syndrome (NMS) which is an idiosyncratic, life threatening complication of treatment with antipsychotic drugs. We report here a case of NMS in a patient of leprosy who was taking Multibacillary regimen (MDT-MB) for 1year before onset of APPD and developed NMS on treatment with Haloperidol. Patient was successfully managed with supportive measures and Bromocriptine.

Keywords : Leprosy, MDT, Psychosis, Neuroleptic Malignant Syndrome (NMS), Haloperidol

Introduction

Neuroleptic Malignant Syndrome (NMS) has been described as idiosyncratic, life-threatening complication of treatment with antipsychotic drugs that is characterized by fever, severe muscle rigidity, and autonomic and mental status changes (Caroff 1980). The pathogenesis of muscle rigidity in NMS is usually attributed to the dopamine receptor blockade resulting in impaired temperature regulation and autonomic changes (Stubner et al 2004).

Leprosy has been associated with increased prevalence of psychiatric comorbidity among patients (Verma & Gautam 1994). We report here a case of acute psychosis in a patient of multi bacillary leprosy who developed NMS during the management of psychosis.

Case Report

A twenty-two years old unmarried male was referred for psychiatric assessment by Dermatology Department of our hospital for his disruptive behaviour. He was suffering from leprosy and was taking MDT-MB (Rifampicin 600 mg once a month, Dapsone 100 mg daily and Clofazimine 300 mg once a month and 50 mg daily) for past one year. He had one-month history of acute onset grossly agitated behaviour in the form of unprovoked aggression, fearfulness, making

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obscene gestures, talking to self, poor self-care and inability to sleep at night. Patient didn't have any history of substance use and didn't experience any symptoms suggestive of mental illness in past. Family members denied any history of mental illness in family. As patient was perceived dangerous to others, he was brought in physically restrained state to the psychiatry outpatient department by family members. Patient was grossly agitated, uncooperative and was trying to get out of ropes tied around his hands. Patient was uttering obscenities and was making obscene gestures. Intermittently he would talk to himself in low volume which was barely audible. Patient's physical restraints were removed, and he was admitted in our hospital. His blood investigations including complete hemogram, liver function tests, renal function tests, serum electrolytes, chest X-ray PA view, ECG and fundus (eye) examination were within normal limits. The diagnosis of Acute Polymorphic Psychotic Disorder (APPD) without symptoms of Schizophrenia (ICD-10, F.23.0) was made. He was prescribed oral Haloperidol 20 mg/day, Trihexyphenidyl 2 mg/day and Clonazepam 4 mg /day in divided doses. In view of possibility of Dapsone induced psychosis, Dermatology department's opinion was sought. Dapsone was immediately stopped by the Dermatologist.

On the 8th day of admission, due to poor drug compliance and continued disruptive behaviour, patient was shifted to parenteral (intramuscular) Haloperidol 10 mg/day and Promethazine 100 mg/day in two divided doses. On 10th day of admission, patient developed fever (102°F), stupor, cogwheel rigidity in bilateral upper and lower limbs, mask like face, tremulousness, tachycardia and sweating.

His psychotropic medicines were stopped and laboratory investigations were done. Patient had raised leukocyte count 19.51 X 10^{3}/mm, serum Creatine Phosphokinase (CPK) 18650 IU/litres, lactate dehydrogenase 1169 IU/litres. Patient had marginally raised liver transaminases and renal function tests were within normal limits. Patient's MRI brain was within normal limits and CSF examination revealed protein levels 65 mg/dl. Opinion was sought from departments of Medicine and Neurology who after carrying out investigations and ruling out other possibilities diagnosed patient to be suffering from NMS. Patient was given intravenous fluids and nasogastric feeding to maintain adequate hydration and nutrition. His vital parameters were regularly monitored. Patient was prescribed oral Bromocriptine 7.5 mg/day in three divided doses. Patient responded to treatment when his tremulousness, rigidity and stupor abated and CPK levels returned to normal on 28th day of admission. When above said symptoms improved, patient had also shown improvement in agitated behaviour, gesturing, talking to self and poor self-care. Patient only had decreased sleep for which oral clonazepam 0.5 mg was prescribed at bedtime. Bromocriptine was tapered and stopped over next 10 days. He was discharged from hospital on 45th day when he had recovered from NMS and no active psychopathology was present. He was not prescribed antipsychotic drugs at the time of discharge. Dapsone was not reinitiated by Dermatologist and patient was discharged on Rifampicin 600 mg once a month and Clofazimine 300 mg once a month and 50 mg daily. Although patient was followed up on monthly basis for up to 6 months after discharge, he didn't experience relapse of mental illness.

Discussion

Psychosis has been reported to occur in 3% patients of leprosy (Muir 1939). Dapsone has also been implicated in causation of potentially severe psychiatric symptoms which usually revert with

the stoppage of Dapsone (Daneshmend 1989). Our patient was on MDT-MB for one year before he suffered from acute psychosis. He developed psychosis when he was on Dapsone which remitted after the discontinuation of Dapsone and management with Haloperidol. Patient was not re-challenged with Dapsone by Dermatologist. In the present case, the reintroduction of Dapsone could have made relationship between Dapsone and psychosis more apparent if patient had experienced relapse of psychotic symptoms.

The patient was prescribed Haloperidol orally followed by intramuscular Haloperidol with Promethazine for the management of psychosis. Haloperidol and Promethazine are commonly combined for the management of acute agitation and violent behaviour and has been found effective (Alexander et al 2004). Patient was on a high potency antipsychotic agent (Haloperidol) administered parenterally which are identified risk factors for development of NMS (Keck et al 1989, Stubner et al 2004). The duration of NMS in the present case was approximately 18 days. In most patients, the symptoms resolve within 2 weeks and reported mean recovery times are between 7 and 11 days (Caroff & Mann 1993).

Awareness of such rare complications is important for Leprologists also as they are mainly responsible for overall management of these patients. Early detection and prompt management of co-morbid psychiatric disorder(s) not only will improve adherence to MDT, but also will help patients to reintegrate in the community where leprosy (Singh 2012) and psychiatric disorder (Kulesza et al 2014) are stigmatized.

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