

Late Onset of Acute Cervical Dystonia in Pediatric Patient: A Case Report

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I. Introduction

Dystonia is a condition characterized by prolonged co-contraction of the agonist and the antagonist musculature, which lead to slow, repetitive, involuntary and twisting movements that lead to sustained abnormal postures that become fixed.

One of the major causes of dystonia is use of antipsychotics and usually antipsychotic-induced acute dystonic reaction presents within 72 hours of beginning antipsychotics or after a substantial increase in dosage (Lehan et al, 2004). If untreated, acute dystonic reaction may last hours or days.

Cervical dystonia, also called as spasmodic torticollis, is a painful condition in which involuntary contraction of neck musculature causes the head to pull to one side and remain fixed in this posture. It is one of the most common forms of focal dystonia.

II. Case Report

A 12-year old male, studying in standard VIII, resident of Chennai, presented to the psychiatric O.P.D. of S.B.M.C.H. with involuntary rotation of head to the left-side.

The patient had suffered from sleep-disturbance, since few days. The mother of the patient who had been diagnosed with Bipolar Affective Disorder and is under treatment for the same since 7 years, administered 1mg Risperidone to him orally. The mother stated that she did this out of concern that her son would develop features of psychiatric-disorder similar to her if he did not get proper sleep. Two days later the patient suffered from an episode of epistaxis, which got resolved after being treated by a general physician. The patient was prescribed Amoxicillin 500mg with Potassium Clavulanate 125mg in oral form for 5 days. After two days the patient developed rotation of head to the left-side associated with pain. The patient was unable to straighten his head even with voluntary effort. The patient was rushed to the treating general physician who referred the patient to Department Of Pediatrics, S.B.M.C.H..

At the Department Of Pediatrics, S.B.M.C.H. the patient underwent basic physical examination and extensive blood investigations. The serum calcium level was 10.6 mg/dl, serum magnesium level was 2.0 mEq/L, and serum potassium level was 4.9 mEq/L. This along with no involvement of muscles of limbs ruled out tetany. The serum ceruloplasmin level was found to be 29 mg/dL, which along with the absence of Kayser-Fleischer ring ruled out Wilson's disease. All other biochemical parameters were also found to be in normal range. The patient was then referred to the Department Of Psychiatry, S.B.M.C.H..

At the Department Of Psychiatry, S.B.M.C.H. the patient underwent detailed neurological examination in which no abnormality was recorded, except 70° rotation of head to the right and tongue tremors. The C.T. scan and M.R.I. of the brain showed nothing significant. The patient then underwent mental-status examination in which his affect was noted as anxious with no abnormalities of thought or perception. The patient was constantly trying to straighten his head and there was no increase in rotation of head during allotted motor-tasks. This helped to rule out conversion disorder and make a diagnosis of acute dystonia involving cervical region and tongue. The patient was administered "Toronto Western Spasmodic Torticollis Rating Scale- Severity Subscale", on which he scored 23.

The patient was prescribed 2mg Trihexyphenidyl Hydrochloride orally per day. The dystonia resolved within another 6 hours and the medication was stopped after 3 days.

III. Discussion

Antipsychotic-induced acute dystonia is described as "sustained abnormal postures or muscle spasms that develop within seven days of starting or rapidly raising the dose of the antipsychotic medication, or of reducing the medication used to treat (or prevent) acute extrapyramidal symptoms".¹ It is to be noted that other drugs like some antidepressants and antiemetics can also cause acute dystonia, though less frequently.

The prevalence of antipsychotic-induced acute dystonia varies with risk-factors. In the age-group of 10-19 years the prevalence of antipsychotic-induced dystonia is high and it decreases linearly with increasing age. The prevalence of drug-induced dystonia is higher in male sex when compared to females.²

The pathophysiology of antipsychotic-induced acute dystonia is based on blockage of D₂-receptors in the caudate, putamen and globus pallidus, which are constituent parts of the basal ganglia. This explains why acute dystonia is less prevalent in the elderly, as D₂ activity reduces with age.³

The treatment of antipsychotic-induced acute dystonia involves administration of anticholinergic or antihistaminic drugs. If the antipsychotic drug cannot be stopped then switch to a safer second-generation antipsychotic. Drugs should be continued for at least 24 to 48 hours after dystonia has resolved to prevent recurrence. Prophylactic drug in the form of an anticholinergic are usually added while treating with antipsychotic drugs.

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