Case Report

Extrapyramidal side-effects of low-dose aripiprazole in an 11-year-old child

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ABSTRACT

Partial agonism of D2 and 5-HT1A receptors accounts for the low incidence of extrapyramidal side-effects of aripiprazole. Extrapyramidal symptoms (EPS) during treatment with therapeutical doses of aripiprazole have been reported in adults and children. To the best of our knowledge, no cases of EPS with low doses (5 mg) have been reported until now. In this article, we present an 11-year-old child who developed EPS on low doses (5 mg) aripiprazole. This case emphasizes the need for careful surveillance for the development of EPS in patients treated even with low doses of aripiprazole.

Key words: Aripiprazole, child, extrapyramidal side-effects, low dose

Introduction

Aripiprazole has been shown to have favorable extrapyramidal symptom (EPS) risk profile in both short-term and long-term randomized double-blind clinical trials.[1] The incidence of EPS and related adverse events is low when compared with other conventional and atypical antipsychotic agents.[2,3] Aripiprazole is a partial agonist of D2 receptors because of which it exhibits functional dopamine antagonism on hyperactive dopamine neurons and agonistic action in hypodopaminergic conditions.[4] Based on this "unique" mechanism of partial agonistic action, it has a high margin of safety with regard to extrapyramidal side-effects except akathisia, which are comparable to placebo.[5]

Aripiprazole is commonly prescribed in the dose range of (10–30) mg in clinical practice. EPS as side-effects of treatment with aripiprazole 10 mg or higher have been previously reported in adults and children.[6-8] However, no cases of EPS with the doses of 5 mg have been reported until now. We describe a case of 11-year-old child with a diagnosis of acute and transient psychotic disorder who developed EPS on low dose (5 mg) aripiprazole.

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Case Report

An 11-year-old boy with uneventful birth and developmental history without past and family history of neurological and psychiatric illness, presented to the outpatient department of Mental Health Institute, SCB Medical College, Cuttack, Odisha, India with complaints of fearfulness, suspiciousness, irritability and decreased sleep for last 7 days. Delusions of persecution were present at the mental status examination. Detailed medical evaluation including neurological examination revealed no significant findings. He was diagnosed to be suffering from acute and transient psychotic disorder, in accordance with International Classification of Diseases-10th Edition criteria.[9] The treatment with aripiprazole 5 mg e.d. and lorazepam 1 mg e.d., was initiated. Two days after the first dose of aripiprazole, the patient developed signs of EPS. He developed stiff and painful arms and legs, tremor of the upper extremities, slurred speech and drooling of saliva. He also presented with parkinsonian gait and cogwheel rigidity. The treatment with aripiprazole was ceased immediately, and given promethazine injection 50 mg i.m. and trihexyphenidyl 4 mg e.d. 1-week after, the patient was almost completely without EPS.

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Discussion

The incidence of EPS in children treated with aripiprazole is not known. Although aripiprazole is considered one of the safest atypical antipsychotics, the case presented here raise concerns about the EPS potential of aripiprazole. To the best of our knowledge, this is the first case of extra-pyramidal side-effects of aripiprazole in low doses in a patient not previously exposed to other antipsychotics, and with no comorbid medical conditions. We would like to emphasize the need for careful surveillance for the development of EPS in patients treated even with low doses of aripiprazole.

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