How many extrapyramidal and none-extrapyramidal side effects can a person experience from Aripiprazole? A Case Report.

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Aims and Hypothesis

To report a rare case of multiple aripiprazole-induced side effects including parkinsonism.

INTRODUCTION

As an atypical antipsychotic that acts as a partial dopamine receptor agonist, aripiprazole has a unique pharmacodynamic profile with a low rate of extrapyramidal side effects (EPS) and a reduction in prolactin levels. Trials have shown either no significant difference in incidence of EPS than placebo or an incidence of 5% of patients developing EPS[1,3]. Otherwise, most EPS are reported through case reports despite its rare occurrence[5,6,7,8,9]. Here we report an unusual case of bipolar mania who developed both parkinsonism and akathisia with aripiprazole.

Method

A case report

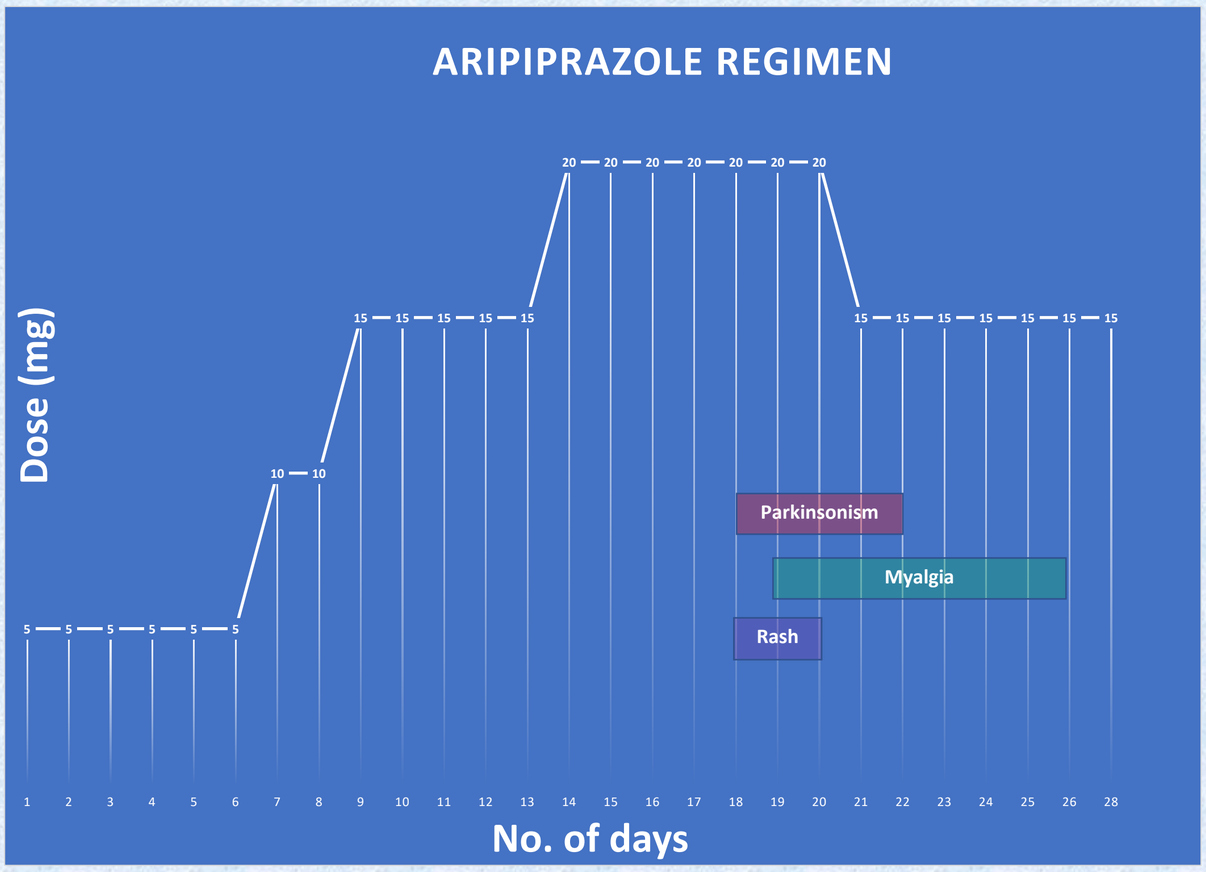
Results

A 32 year-old female was admitted for two weeks of psychomotor agitation associated with persistent elated mood, increased energy, reduced need for sleep, pressured speech, inflated confidence and spending spree which was unusual for her. It was precipitated by sexual assault. There was no recreational substance or alcohol misuse. She reported being severely depressed for over a year experiencing depressed mood, loss of enjoyment and interest in most things and increased fatigue. She also experienced low self esteem, feeling unworthy, bleak view of the future and diminished appetite of severe intensity. There was no substantial family history other than her nephew who was diagnosed with bipolar affective disorder type 1 and maintained with Lithium. She was diagnosed with bipolar affective disorder (current episode manic without psychotic symptoms) using ICD-10 diagnostic criteria. Initially her young mania rating scale was 31 out of 60 and clinical global impression (CGI) of 7. Her physical examination, blood investigation and ECG were unremarkable.

Aripiprazole was started at 5mg/day and increased to 20mg/day over a two-week period. By the start of the 3rd week of admission her YMRS was 9 out of 60 with residual symptoms of pressure of speech and elated mood and she started to obtain partial insight into her mental health. Lithium was then commenced at 400mg ON and subsequently discontinued after 2 doses due to sudden onset of drowsiness, drooling, feeling slow and calmer.

A day before Lithium was discontinued the patient reported feeling stiff. Examination of the patient revealed hypomimia and bilateral upper limb rigidity, she was given procyclidine 5mg OD PRN. The next day aripiprazole was reduced to 15mg/day and given Procyclidine 5mg PRN again, however she now developed bilateral leg swelling below the knees with a pruritic rash on her upper thighs on the lateral aspect. The next day she experienced bilateral calf pain and pruritic rash had reduced. A repeated blood text was taken and creatine phosphokinase was raised to 360. Five days since the onset of symptoms she developed cog wheel and lead pipe rigidity, bradykinesia with shuffling gait and a resting tremor concordant with parkinsonism as well as an inability to sit still and restlessness in her legs (akathisia) and myalgia being very tender on palpation on both legs. She was prescribed Procyclidine 10mg IM and all symptoms settled with 2 hours of administering procyclidine. She was then commenced on Procyclidine 5mg BD regularly and over the next week all symptoms had subsided and her creatine phosphokinase was 136. She remained apyrexial and no autonomic instability throughout

Olanzapine was started and optimised until 15 mg ON with no significant side effect. Her YMRS on discharge was 6 and CGI of 2.



Conclusion

Aripiprazole is said to be a partial agonist of the D2 and 5-HT1A receptors and antagonist of the 5-HT2 receptor[2]. Aripiprazole may act as an antagonist to D2 receptors in the mesolimbic pathway and conversely act a partial agonist to D2 receptors in the mesocortical pathway[3]. It also binds to 95% of nigrostriatal D2 receptors at clinical approved doses[1]. Despite the uncertainty of the true depth of the mechanism of action of aripiprazole extra-pyramidal side effects have been shown to be no greater than the placebo[1,3].

An explanation could be because it can behave as a presynaptic D2 agonist and at the same time behaves as an antagonistic at postsynaptic D2 receptors which does not lead to an upregulation of D2 receptors at the striatum[4]. Therefore, it is unusual for aripiprazole to exhibit symptoms of parkinsonism and akathisia. Hence collaborative practice and shared decision making are always an essential component of evidence-based medicine to ensure patient's receive an effective tolerable treatment.

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