ORIGINAL RESEARCH PAPER

Psychiatry

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ARIPIPRAZOLE INDUCED WEIGHT GAIN

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ABSTRACT

Aripiprazole is an atypical antipsychotic drug. Aripiprazole has found widespread use in psychiatry, especially in schizophrenia, bipolar disorder, depression, schizoaffective disorder and obsessive compulsive disorder. Aripiprazole has been known as a weight neutral atypical antipsychotic. This case report examines the treatment and progression of a 16-year-old male with BPAD who experienced substantial weight gain while receiving aripiprazole monotherapy. This report emphasizes the importance of closely monitoring weight-related side effects in patients receiving aripiprazole treatment, particularly within the adolescent demographic.

INTRODUCTION

Aripiprazole is an atypical antipsychotic drug. Aripiprazole has found widespread use in psychiatry, especially in schizophrenia, bipolar disorder, depression, schizoaffective disorder and obsessive compulsive disorder. Its primary mechanism of action comprises of partial agonist activity at dopamine D2 receptors and serotonin 5 HT1A receptors and antagonists activity at 5HT2A receptors.

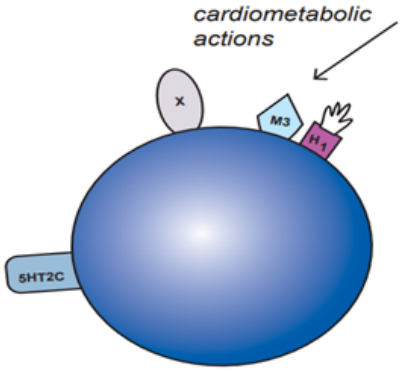

Figure 1: Aripiprazole action on receptors
Sources: Stahl's essential psychopharmacology

Table 1 :Weight gain propensity of SGAs comparison.

Table 1. Relative Effect of SGAs on Metabolic Disturbances

Generic (Trade Name)	Weight Gain	Dyslipidemia	T2DM
Olanzapine (Zyprexa)	High	High	High
Clozapine (Clozaril)	High	High	High
Risperidone (Risperdal)	Moderate	Low to moderate	Low
Ziprasidone (Geodon)	Low	Low	Low
Quetiapine (Seroquel)	Moderate	Moderate	Low to moderate
Aripiprazole (Abilify)	Low	Low	Low
Paliperidone (Invega)*	Low	Low	Low
Asenapine (Saphris)*	Low to moderate	Low	Unknown
Iloperidone (Fanapt)*	Low to moderate	Low	Unknown

* Due to the limited trial data for these agents, their metabolic-effect profiles are based on the package insert.
SGA: second-generation antipsychotic; T2DM: type 2 diabetes mellitus.
Source: References 1, 6.

Sources : *US Pharm.* 2010;35(11):41-48.

Case Report

An adolescent male presented to OPD with symptoms of irritability, hyperexcitablilty, decreased need for sleep, increased energy and significant socio-occupational impairment, with insignificant family history and no substance use history. Past history of two depressive episodes was present, 2 years and 1.5 years back, for which patient was not on any medication. On general physical examination, patient weighed 75kgs with height 1.7m and BMI 25.9 . His Mental Status findings included flight of ideas, tangentiality, spontaneous and pressured speech and elated mood with episodes of irritability. A diagnosis of BPAD with current episode mania was made based on International Classification of Diseases, 10th edition and patient scored 40 on Young Mania Rating Scale. Patient was started on Lithium 600 mg per day in divided doses and Aripiprazole 10 mg on the first visit after baseline investigations, which were within normal limits (HbA1c, Lipid profile, Lithium, TFT, ECG). A week later serum lithium levels were 0.9 mEq/L. Patient's mood symptoms were not improving, hence lithium was increased to 900 mg per day in divided doses.

Repeat lithium levels showed it to be within therapeutic range i.e 1.1 mEq/L. 15 days after increasing the dose of lithium, patient developed resting tremors in both his hands, which were distressing for him and affected his daily functioning hence the lithium was tapered and stopped over the next month. Patient had maintained his weight till then. Simultaneously, Aripiprazole was increased from 10mg OD to 20mg per day in divided doses and the patient's manic symptoms were reduced by 70%.(YMRS:12) Following 2 months, symptom reduction was 95% on full compliance. The only complaint was mild loss of concentration in school but the patient gained 11 kgs weight from 75 to 86 kg (BMI: 29.7)(YMRS:2) Investigations were repeated with no deviation from baseline (TFT, LFT, RFT, ECG). Considering the significant weight gain, Aripiprazole was cross tapered and Ziprasidone 40 mg per day was introduced over 2 months. Subsequently, patient was followed up after 2 months when patient showed 60 percent reduction in symptoms. His weight at this visit was 81kgs which amounted to a reduction of 5kgs (YMRS:2) Hence, 10 mg Aripiprazole was re-introduced as a re-challenge for weight gain. In the next follow up after 2 months, the patient showed 4kg weight gain again from 81kg to 85kg with no apparent betterment of symptoms. Patient's baseline investigations (HbA1c, Lipid profile, Lithium, TFT, ECG) were repeated with no apparent deviation from baseline. Consent was taken for the case report from the patient as well as the caregiver.

DISCUSSION

Aripiprazole is largely viewed as a weight neutral drug in comparison to other atypical antipsychotics to such an extent that switching over to Aripiprazole is common practice in patients experiencing weight gain from other atypical antipsychotics[1]. In this case report, Aripiprazole was considered the cause of weight gain as the patient's weight reduced when the drug was withdrawn and experienced weight gain when it was reintroduced. The possible mechanism of weight gain can be attributed to Aripiprazole's partial 5HT2C and H1 antagonism.

Figure 2 : Metabolic Highway
Source : Stahl's Essential Psychopharmacology

CONCLUSION

This report highlights the importance of close follow up on weight and BMI in such patients on Aripiprazole, for early detection of metabolic syndrome via close monitoring and prevention of further cardiovascular consequences along the "metabolic highway"

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