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SUDDEN WEIGHT GAIN INDUCED BY OLANZAPINE IN A CHILD: CASE REPORT

Psychiatry

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KEYWORDS

Recently, use of psychotropic medication is on rising in children and adolescents, but, their metabolic and endocrine side-effects (weight gain, obesity, and related metabolic abnormalities such as hyperglycemia and dyslipidemia) are of particular concern, especially within this age group. Risk of antipsychotic-induced metabolic side-effects appears to be more in the pediatric population than adults.(Correll & Carlson, 2006; Newcomer, 2004; Stigler, Potenza, Posey, & McDougle, 2004) Poor diet and sedentary lifestyle further contribute to weight gain in psychiatric patients in addition to medications. Excessive weight further leads to stigmatization, social withdrawal and poor compliance with medications, leading to deterioration in psychiatric symptoms. Further, excessive obesity may lead to metabolic syndrome hence increasing the future risk of cardiovascular morbidity and mortality.(Weiss et al., 2004) Hence, sex- and age-adjusted body mass index (BMI) percentiles are crucial to assess weight gain in children and adolescents.(Correll, 2005). Recently, atypical antipsychotic agents have largely replaced traditional agents as first-line drugs for the treatment of schizophrenia and psychotic mood disorders. However atypical antipsychotics are associated with different side effect profile than typical antipsychotics. In adults side effect profile of atypical antipsychotic drugs is well known, but in pediatric age groups is rather new and limited.(Overbeek, de Vroede, Lahuis, Hillegers, & de Graeff-Meeder, 2010)

The present case report discusses a child who gained weight very rapidly with olanzapine, an atypical antipsychotic.

1. Case:

A 9 years old boy, a resident of Delhi, presented to us with the illness of 1-month duration, acute onset, continuous course and without any precipitating factor. The illness was characterised by polymorphic symptomatology, withdrawn behaviour, perplexity, hallucinatory behaviour, delusion of persecution, disturbed biological and social function, academic decline and poor self-care. He had nil contributory past, family, personal history and premorbidly was an easy child. On examination patient was found to be a thin built child with height of 124 cm, weight of 26 kg, waist circumference of 56.5cm and BMI of 16.9kg/m^2. He had adequate hygiene and grooming, with perplexed affect, delusion of persecution, impaired social and personal judgement, absent insight. Routine investigations in form of complete blood count, liver function test, blood sugar levels, serum lipid profile, serum electrolytes levels, serum renal function test, thyroid function test were with in normal limits. MRI brain and EEG were also found to be normal. The patient was started on tab olanzapine which was increased up to 10mg and got clonazepam up to 1.5 mg. He improved within 2 weeks but after that patient was noticed to have central obesity, increased weight gain of 2.6kg and increased waist circumstance to 59 cm. So in view of sudden weight gain and increased waist circumference olanzapine was cross tapered with tab aripiprazole 7.5 mg on which he had no further weight gain.

We present this case report of a young boy who during the course of treatment with olanzapine developed side-effect in form of weight gain around 2.6 kg over a period of 2 weeks. In 2009 Jakovljevic also reported weight gain due to olanzapine in adolescent girl but in contrast that was over a period of 8 to 9 months.(Jakovljević, 2009) The above finding suggests that olanzapine could also have different mechanism for rapid increase in weight which needs further research in this area.

Similarly, Kryzhanovskaya also reported weight gain in adolescents treated with olanzapine in comparison to placebo. He reported average weight gain of 3.9 kg in adolescents treated with olanzapine. He also reported that the weight gain is more in the initial 4 weeks of therapy and subsequently the rate of weight gain decreases over time.(Kryzhanovskaya, 2009) Initial and rapid increase in weight was also found in our case.

Similar findings of rapid weight gain followed by slower weight gain have been observed in other studies as well.(Findling et al., 2010; Fleischhaker et al., 2008; Ratzoni et al., 2002) Ratzoni et al reported extreme weight gain with olanzapine and risperidone in adolescents as compared to adults. This side effect should be taken into consideration before prescribing these medications, especially in paediatric population.

In contrast to our case, Graovac et al reported abrupt weight gain (16 kg) in an adolescent treated with a stable dose of olanzapine in the last 2 to 3 months of one-year treatment.(Graovac, Ružić, Rebić, Dadić-Hero, & Frančišković, 2010)

Gebhardt et al reported that individuals with low pretreatment BMI show more rapid weight gain than their heavier peers. This supports our case report as the patient was having a BMI of 16.9 (underweight) prior to treatment. Gebhardt et al. reported younger age to be an independent factor in antipsychotic associated weight gain which supports present case. He also reported female gender as an independent factor in antipsychotic associated weight gain which is in contrast to our case. (Gebhardt et al., 2010)

From the above discussion we can conclude that weight gain associated with olanzapine become more important while treating children and adolescent group, hence, should be taken care of. Further studies on efficacy and safety of atypical antipsychotics particularly in children and adolescents with schizophrenia are needed in future for better clarity.

Conflict of interest: None.

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