Case Series: Ziprasidone as a treatment option for improving impulse control in prepubertal boys at risk for weight gain

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Introduction:

The use of atypical neuroleptics for treating disruptive behavior and impulsivity in school children with ADHD is well established in child psychiatry today. One major limiting factor is weight gain. We used ziprasidone as a weight neutral alternative to the well established risperidone treatment

Profile of ziprasidone:

Ziprasidone is a Benzisothiazolylpiperazin chemically not related to any other AN. It is a D2 and 5HT2A antagonist with a higher affinity to 5HT2A than D2 binding sites (high 5HT2A to D2 binding affinity ratio). ziprasidone´s further antidepressant potential originates from its 5HT1A and 5HT1D agonism and its moderate inhibition of the Serotonin and Noradrenalin reuptake. A weak affinity to H1 receptors results in a low potential for weight gain and sedation. ziprasidone has little potential for interaction with drugs metabolised by cytochrome P 450. The high 5HT2A to D2 ratio and weak H1 affinity suggest positive effects on symptom reduction without significant side effects such as weight gain.

Methods:

We report a retrospective chart review of 4 male patients (age range 9 – 13) who were treated in an off label condition with ziprasidone (dose range 40 – 60 mg/d). Selection criterion for the use of ziprasidone was pre-existing obesity or excessive weight gain under risperidone. Assessments included psychometric questionnaires, adverse effects (ECG) and weight monitoring.

Results:

Impulsivity:

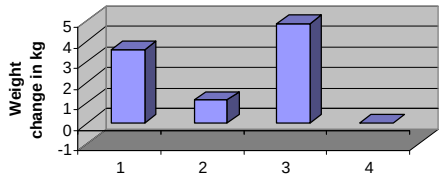
Ziprasidone (dose range 40 – 60mg/d) led to an improvement in the clinical impression in 3 (patient 1, 2, 3) of the 4 boys.

Weight

We found a moderate weight gain in the first 4 – 6 months (Tab. 1, Fig. 1). Patient 4 had no treatment effect and no weight gain.

Tab. 1	Weight in kg before ziprasidone	Weight in kg under ziprasidone	Weight change in kg
Patient 1	67,5	71,6	3,6
Patient 2	56,0	57,1	1,1
Patient 3	70,6	75,5	4,9
Patient 4	48,0	48,0	0

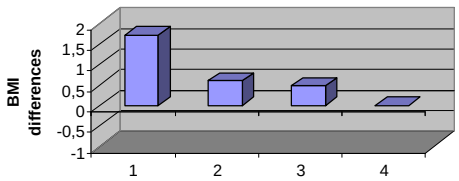
Fig.1 Weight change before and under Ziprasidone



BMI: Tab. 2 and Fig.2 show the BMI difference in the first 4 – 6 months.

Tab. 2	BMI before ziprasidone	BMI under ziprasidone	BMI difference
Patient 1	28,1	29,8	1,7
Patient 2	28,6	29,2	0,6
Patient 3	29,8	30,2	0,4
Patient 4	21,0	21,0	0

Fig. 2 Differences in BMI before and under Ziprasidone



Side effects:

Patients reported no major adverse effects.
One nine year old boy showed a transient increase of irritability and anxiety.

Conclusion:

Even though risperidone is labelled in Germany for the treatment of disruptive behaviour disorders for children aged six and older ziprasidone may be a useful alternative. In a high risk group of four obese boys we found in three boys similar clinical effects and less weight gain even in long-term treatment