
Letter to the Editor

ATOMOXETINE TREATMENT FOR ENCOPRESIS IN A CHILD WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

Dear Editor,

Atomoxetine, a selective inhibitor of noradrenaline re-uptake, is the first non-stimulant drug approved for the treatment of attention deficit hyperactivity disorder (ADHD). Beside ADHD, it was also effective in the treatment of nocturnal enuresis (Sumner et al. 2006, Shatkin 2004). There are a limited number of case reports demonstrating its efficacy for encopresis (Hergüner and Hergüner 2012, Türkoğlu et al. 2015, Yücel et al. 2015). We aimed to present a case report with encopresis and ADHD whose symptoms ameliorated with atomoxetine treatment.

This case report presented a 10 year-old boy living with his family (parents and brother). He was referred to our clinic because of complaints of getting bored quickly, forgetfulness and hyperactivity. A psychiatric examination revealed that he was restless and impulsive with short attention span. Furthermore, he had incontinence five to six times a week accompanied by constipation for three years. According to his teacher, he had difficulty to sit still, hyperactivity, attention deficit, forgetting his belongings and also had incontinence in the classroom. The patient had no history of psychiatric treatment. According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association 2013) and the related scales (Disruptive Behavior Disorders Child and Adolescent Screening and Rating Scale for Children and Adolescents, Conner's Parent and Teacher Rating Scale), the patient was diagnosed with ADHD, encopresis with constipation and overflow incontinence. Behavioral intervention was recommended for his encopretic

symptoms. However he refused to comply. Atomoxetine, 0.5 mg/kg/d (18 mg/d) was initiated for ADHD and was titrated up to 1.2 mg/kg/d (40 mg/d) after two weeks. After the first month, complaints regarding ADHD symptoms from both school and home based on the medical history and scales significantly decreased. Encopresis occurred only once in this period. The amelioration of his encopresis continued during a 6-month period.

Encopresis is defined as the mostly involuntarily or occasionally voluntarily repeated passage of feces into inappropriate places. The prevalence of ADHD among children with encopresis was found to be 10 times more frequent than in the general population. Case reports have shown the efficacy of methylphenidate and imipramine (Golubchik and Weizman 2009, Connell 1972). They speculated that the medication led to improvement in executive functioning, working memory, and impulse control (Golubchik and Weizman 2009). Furthermore, they suggested that imipramine might make the children more sensitive to their visceral cues (Connell 1972). Recent studies demonstrated that atomoxetine had an effective on enuretic symptoms. However, its anti-encopretic effect has not been clearly established. Our report showed that atomoxetine was responsible for the improvement of encopresis without any behavioral intervention. This improvement continued for a long time. Noradrenergic effect of atomoxetine may probably have an impact upon the amelioration. Atomoxetine increases synaptic noradrenaline level which is a basic transmitter of the sympathetic nervous system. Noradrenaline relax the internal anal sphincter with sympathetic efferent activity (Akervall et al. 1988). This relaxation may play a role especially in the improvement of encopresis with constipation and overflow incontinence where the internal anal sphincter strains tightly. This mechanism supports our case report. Although it is not exactly known how atomoxetine ameliorates the encopresis in cases without constipation, increase in higher executive functions induced by noradrenaline may improve encopresis. However, despite these possible mechanisms, anti-encopretic effect of atomoxetine needs to be studied with further.

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doi: 10.5080/u14831

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