



LETTER TO THE EDITOR

Use of sertraline in an adolescent with nocturnal enuresis

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Dear Editor,

Enuresis nocturna (EN) is an elimination disorder with adverse psychosocial effects frequently seen in children and adolescents (1). Anticholinergic agents, desmopressin, and tricyclic antidepressants such as clomipramine are frequently used in the treatment of EN (2,3). Sertraline is a safe and reliable agent used in the treatment of anxiety disorder, major depressive disorder, and obsessive-compulsive disorder in children and adolescents (4). There have been few case reports concerning the efficacy of sertraline in the treatment of EN (5,6). We report a case of a 16-year-old patient who was diagnosed with a major depressive disorder and whose EN symptoms subsequently resolved with sertraline therapy.

NK, a 16-year-old girl, was brought to our clinic by her mother due to sadness, negative feelings about herself, inability to enjoy life, and lack of energy. Written consent was obtained from the patient and her parents. Histories taken from the patient and relatives revealed that she had been dispirited, dejected, unable to enjoy life, had felt worthless, and had harbored thoughts about death for the previous 1 month. The Children's Depression Inventory was applied to psychometric evaluation, and a score of 34 was determined. The score range on this scale is 0–54, and a score of 19 or above is evaluated as indicating major depressive disorder. The patient was diagnosed with major depressive disorder at the first evaluation and was started on sertraline therapy at 25 mg/day. At examination 1 month subsequently, we

learned that the depressive symptoms had partially improved, and her score on the Children's Depression Inventory score decreased to 21. We also learned from the patient's history that EN occurred 4–5 times a week and that this symptom had decreased by half after starting sertraline therapy. The patient has had EN since she was a child. There has never been a period when EN complaints improved from time to time. However, her parents had never applied to child psychiatry about EN before. She had not received any previous treatment for EN. The urology department was consulted. Tests revealed blood urea nitrogen (BUN) 13, creatinine 0.6, and glucose 83, while complete urine examination and other biochemistry values were within normal limits. No pathology was determined at the urological examination. Sertraline therapy was adjusted to 50 mg/day. At examination 1 month subsequently, the patient's depressive symptoms had decreased significantly, and the enuresis had resolved entirely. The Children's Depression Inventory score decreased to 10. At the third interview with the patient, we learned that she had not taken her medication for 1 week during the pandemic and that the enuresis occurred once a week. Sertraline therapy was again initiated, and the enuresis resolved completely in 2 months. The patient had no history of any other drug or herbal product use during sertraline therapy. Follow-up was planned at two-month intervals. In the follow-up 2 months later, the patient was still on sertraline treatment and the patient still had no complaints of enuresis.

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This report describes a case of enuresis symptoms resolving with sertraline therapy in a 16-year-old patient. To the best of our knowledge, there have been very few case reports of sertraline being used off-label in the treatment of EN. Nelson et al. reported that enuresis symptoms decreased with 25 mg of sertraline therapy in a seven-year-old girl with symptoms of enuresis, encopresis, and anxiety. Similarly, Sprenger reported that enuresis symptoms decreased in a 13-year-old boy with 50 mg sertraline therapy but the symptoms resumed when medication was discontinued. Consistent with the present report, EN symptoms decreased with sertraline monotherapy in both cases (5,6). The facts that EN symptoms decreased in a dose-dependent manner in the present case, resumed when the medication was stopped, and improved when therapy resumed, and the patient received monotherapy while using no other drug or herbal product during treatment suggested that the EN symptoms decreased when sertraline therapy was followed. We thought EN complaints were related to the sertraline dose because the complaints about EN were reduced by half with sertraline 25 mg and entirely resolved when sertraline was increased to 50 mg in 2 months. The fact that the patient had a complaint of enuresis once a week when she was not using the sertraline may be related to the drug or it may be a coincidence. However, the improvement of enuresis within 2 months with the resumption of sertraline treatment suggests that enuresis was resolved with sertraline. In addition, we were unaware of the presence of EN before sertraline therapy was initiated, being administered for depression. This shows that the clinician exhibited no bias concerning treatment.

The sympathetic nervous system prevents urine flow by means of β_3 adrenergic receptors and α_1 adrenergic receptors with the release of noradrenaline, while the parasympathetic nervous system causes urine flow by means of M3 muscarinic receptors with the release of acetylcholine (7). Serotonergic receptors are also involved in the control of bladder activity. Of these, 5-HT_{1a} and 5-HT₃ receptors are particularly associated with bladder activity. 5-HT_{1a} receptor antagonism inhibits bladder reactivity, while 5-HT₃ receptor agonism inhibits ureteral peristalsis. Sertraline exhibits an antagonist effect on 5-HT_{1a} receptors in the central nervous system and an agonist

effect on 5-HT₃ receptors in the peripheral nervous system. This suggests that the antienuretic effect emerging during sertraline use is associated with its effects on these receptors (8–10).

Sertraline is a well tolerable psychotropic agent with a safe side effect profile in children and adults. It will be useful for clinicians to consider sertraline as an off-label option in cases of treatment-resistant enuresis in children and adults.

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