

Secondary Nocturnal Enuresis of an Adult: A Case Report

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Abstract

Nocturnal enuresis is a common medical condition seen during childhood. Although there are a lot of researches about nocturnal enuresis in childhood, a few of them have shown the prevalence of this disease in adults. This report is about a patient who suffers from nocturnal enuresis after being involved to military service and respond well to duloxetine treatment.

Keywords: Nocturnal enuresis; Duloxetine; Urinary continence; Micturition

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Introduction

Enuresis means involuntary and inappropriate micturition at the age of a person whom is expected to control urinary continence [1]. If this involuntary micturition occurs at night while sleeping, it is diagnosed as "nocturnal enuresis". On the other hand if it is determined in daytime it is called "enuresis diurnale". If this condition is encountered after any particular 6 month period of controlled micturition, it is called "secondary enuresis". While it takes the name "primary enuresis" in case of inability in controlling micturition during lifetime [2,3]. Children achieve the ability of urinary continence at the age between 2 and 3 while it lasts until 4 years old including night control [4].

Nocturnal Enuresis (EN) is a common medical condition during childhood. According to DSM-V it is diagnosed if there is repeated and involuntary voiding of urine, manifested twice a week for at least 3 consecutive months, seen after at least 5 years of age and during night-time. Also it should present clinically significant distress or impairment in social, academic or other important areas of functioning and should not be due to direct psychological effect of a substance or any other medical conditions [5]. According to ICD-10 it is classified below the heading of "Emotional and Behavioral Disorders" and the limit of age is defined as 4 [6]. Although there are a lot of researches about nocturnal enuresis in childhood, a few of them are about adults. The prevalence of nocturnal enuresis is determined 0.73-2% according to two researches about soldiers [7,8].

Duloxetine as a type of serotonin and norepinephrine reuptake inhibitors is approved for treatment of depression in 2004 and is affective by blockading of the reuptake of serotonin and norepinephrine. The mechanism of action in the treatment of enuresis is not known exactly. But recently it is begun to use for the treatment of stress type urinary incontinence. Duloxetine effects by the way of onuf nucleus full of serotonin

and noradrenaline receptors which is located in the sacral plexus. In the presence of serotonin and noradrenaline, duloxetine makes pudendal neurons located in onuf nucleus stimulated and consequently urethral sphincter gets contracted. Duloxetine increases sphincter tonus by inhibiting reuptake of serotonin and noradrenaline in synaptic space [9].

Case Study

Socio-demographic features

A.Y., Male, 20 years old, graduated from high school, has been in military service for two and a half months.

Chief complaint and history of the present illness

He admitted to our outpatient clinic because of having urinary incontinence problem for one and a half months. As we learnt from the anamnesis, his symptoms began one month after military service started. Initially his symptoms have been seen two or three times a week then its frequency increased.

Past medical history and social history

He has one younger brother. He lives with his family. There are no severe medical conditions mentioned during prenatal, natal and post-natal and childhood periods. According to his developmental history, he was able to control micturition about 3 years old and no nocturnal enuresis mentioned during childhood. He had circumcision operation at the age of 2. He had a little difficulty in learning how to read and wright but succeeded towards the end

of the first class. After graduation from the high school he found a job as a house painter. He mentioned that his relationships between mother and brother were good but his relationship with father was insufficient. He described his mother as helpful while describing his father as distant, angry and inapproachable. He defined himself as anxious for a long time but added that he had not so much difficulty in socializing. He had no psychiatric or any other medical diseases before.

Family diseases

He didn't mention any medical disease within family members including nocturnal enuresis.

Premorbid personality features

He described himself as quiet, calm, emotional and anxious person. He feels himself inadequate in presenting his anger and any other feelings.

Mental state examination

His appearance is at his age. Self-care is sufficient. He acts properly in his sociocultural condition. Mood is dysphoric. Affect is depressive, anxious and congruent. Eye contact is limited. Tone of his voice is low and his way of speaking is not spontaneous. Level of consciousness, cooperation, orientation, memory and language functions is normal. Attention is slightly reduced. Judgment and insight are sufficient. Thought process is normal. There is no dysfunction in perception. Content of thought doesn't include any delusions, overvalued ideas, obsessions and phobias. His thoughts consist of preoccupations, depressive beliefs and worries about his compliance with military service. Libido, period of sleep and appetite are reduced. Also he described fatigue in the mornings.

Physical and neurological examination

His physical and neurological examinations are normal. The patient was referred to urologist, due to examination, blood and urine tests and urodynamic tests, no pathological condition was found.

Laboratory tests

Blood tests (including biochemistry, complete blood count, and thyroid functions), urine and urodynamic tests and ECG are checked and no pathology was found.

Psychometric evaluation

Determining the level of depression and anxiety Hamilton Depression Scale (Ham-D) and Hamilton Anxiety Scale (Ham-A) are administered by a psychiatrist. Initial Ham-D score was 32 while Ham-A score was 8.

Diagnosis

Major depressive disorder and Nocturnal enuresis are diagnosed according to DSM-V.

Treatment

Duloxetine is prescribed for the depressive symptoms and urinary incontinence. At the end of the 2 weeks symptoms began to

reduce. After one month treatment process depressive symptoms decreased considerably and the patient got total control of micturition at nights. Initial Ham-D score was 32 while after 4 months from the beginning of treatment the score decreased to 8 points. Score of Ham-A also decreased from 8 points to 1 point. Besides pharmacotherapy, his compliance issues of military service have been examined; supportive therapy and cognitive behavioral treatment were performed. In the process of therapy; the difficulties during military service, the thoughts about his problem, the relationship with other soldiers, the attitudes and behaviors of other people were discussed. Alternative solutions for problem solving and conflict reduction were emphasized.

Discussion

Multifactorial factors like genetic predisposition, delay in maturation, sleep disorders, psychological factors, instability of detrusor muscle, reduced functional capacity of bladder, stress, irregularity of osmoregulatory hormones are effective in etiology of enuresis [10-13]. Psychiatric problems are found to increase in secondary nocturnal enuresis and usually occur after the symptoms [14]. Most of the patients with enuresis do not report any significant psychiatric symptoms while the patients with nocturnal enuresis often report them. Also our patient suffers depressive and anxiety symptoms beside enuresis and they start due to military service conditions.

Self-esteem has been found to decrease in adults as in children suffering enuresis [15,16]. In our case; it can be considerable that, distant and compelling father figure may have affected the developing of self-esteem in the childhood of our patient. And military service may have turned out conflicts; as a result, this condition may have triggered the enuresis symptoms.

Some recent writers count the emotional investment made in the function of emptying in different phases of libidinal development, among psychological factors in enuresis as well as interacting with the environment. These authors also emphasize that erotizing urination provides direct impulse satisfaction. According to this they state that the availability of other impulsive fulfillment pathways is also effective in secondary enuresis [17]. As our patient defines himself as a person who cannot express his emotions and anger easily, it is thought that the suppressed anger may also be effective in the urinary incontinence.

Duloxetine has double effect by inhibiting serotonin and noradrenaline re-uptake receptors. The mechanism of reducing enuresis symptoms is not known yet. However it is started to be used in the treatment of urinary incontinence. It is observed that its effects on incontinence come up faster than antidepressant effects [18]. Duloxetine increases the concentration of serotonin and noradrenaline in the environment by inhibiting these amines reuptake in the onuf nucleus which is located in sacral plexus and origin of the afferent neurons of pudendal nerve. This induces rhabdosphincter contraction. Thus leading to more stimulation of the pudendal sinus, increasing the urethral closure pressure and provide benefit to continence [19]. Recently duloxetine has started to be used in stress incontinence by taking advantage of this mechanism. So we considered to prescribe it in our case to reduce both depression and incontinence symptoms.

The importance of psychological therapy has been emphasized in studies made until now especially for the patients with secondary nocturnal enuresis and neurotic personality features [20]. It is important to deal with the patient's cognitions and ability of overcoming [21]. The bed alarm technique, which is one of the behavioral treatment techniques have taken as an effective approach in the literature. By this way approximately 75-80% improvement and 30% relapse have been reported. An average time of 6-8 weeks is required to be successful with this method.

It is described that to get the most effective result, combination treatments must have been performed [22]. We also add cognitive and behavioral treatment to pharmacotherapy in our case. We talked about the circumstances that caused the enuresis and the factors that aggravating and continuing the symptoms. Suggestions were made to support emotional expression. In addition to this we have focused on alternative solutions for problem solving. Also giving permission to rest apart from the military service was contributed to the treatment process.

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