Secondary nocturnal enuresis due to Enterobius vermicularis in adult patient: a case report

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Abstract
Nocturnal enuresis is an involuntary and undesirable bed wetting beyond the age of anticipated bladder control. There is a possible association between certain infections and the propensity to develop nocturnal enuresis including intestinal helminth infections. We present an adult patient aged 33 years with secondary Nocturnal enuresis and history of worm infestation, the ova of the worm was found in the stool of the patient, urine examination and ultrasonography was normal and during the neurological examination we didn’t find any abnormalty. After giving mebendazole tablet as single dose 100 mg and repeated after one week we, stool examination repeated again and the result was normal beside that the general condition of the patient improved with cessation of Nocturnal enuresis.

Introduction
Enuresis is defined as an involuntary and undesirable bed wetting beyond the age of anticipated bladder control, it seen world wide across all races and countries (1). It is a socially disruptive and stressful condition which affects around 15-20% of children older than five, and up to 2% of young adults, although there is a high rate of spontaneous remission, the emotional, social and psychological costs may be harmful (2). Infestation with pinworm (Enterobius vermicularis) is known as enterobiasis, it is linked to age, being most common in children of school age, followed by preschool children (3).

Adults are the least common age group to experience enterobiasis, with the exception of mothers whose children are infested (3,4). Urethral/Vaginal reflux has been suggested as cause for enuresis. This concept is not widely accepted, somewhat more realistic is the suggestion by Sachdev and Howards that a number of cases of secondary enuresis may be due to pinworm infestation (5).

Case presentation
Thirty three years old male farmer patient from AL – Dour District in Salah-Aldeen province presented to the private clinic with history of bed wetting of five months duration associated with anal itching at night with presence of small white worms in the stool at each bowel motion.

The patient mentioned that he was completely normal and didn’t suffer from the bed wetting at all during the whole past years, he have malaise, lack of appetite, nausea and sometimes vomiting, no dysuria no fever and no numbeness or paraesthesia. He had a history of bed wetting at childhood which was self limited and cured without any medication, on examination he was completely normal, a neurologist and urologist examined him and there was no significant abnormality neither in the Central Nervous System nor in the Genito urinary system.

After taking his permission a sample of mid stream urine in the early morning was taken and sent to the laboratory for General Urine Examination and the result was normal, a sample of stool was sent to investigate about the worms infestation and the result was presence of ova of Enterobius vermicularis. Ultrasonography of the abdomen was done to him and the result was normal. He is a father of three boys at school age, they were suffer from enterobiasis during the last four years and they were treated by anti helmenthic drugs.
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A single dose of Mebendazole tablet 100 mg was prescribed for him and another dose of 100 mg was repeated after one week and the same dose was given to all members of the family with instruction about the hygiene and other points which related to the health education and self cleaning, After treatment the bed wetting stopped and the itching in ano disappeared. A sample of stool sent to the laboratory and the result was normal with no presence of ova of Enterobius vermicularis

Discussion

Enuresis is an un intended leakage of urine at least once a week in an individual old enough (older than 4 years) to maintain bladder control (2). Diurnal enuresis is an un intended leakage of urine during waking hours and nocturnal enuresis was defined as bed wetting in children older than 4 years at least once a week.

Primary nocturnal enuresis is an un intended leakage of urine at least once a week in a child who had never had day or night bladder control for a period greater than 6 months. Secondary enuresis is considered when the patient has been toilet trained for at least 6 months after the age of bladder control, and bladder control is subsequently lost (1,2,6,7).

Enterobius vermicularis is a white nematode (round worm) with a length of 8 to 13 mm for the adult female (about the length of a standard staple) and 2 to 5 mm for the adult male. Its width is about 0.5 mm, the ova are oval objects appearing microscopically to have three sides, approximately 55 x 25 mcm (3,4,8). The common residence of the adult pinworm is the large intestine, where it attaches to the cecum and appendix. Following mating, the gravid female must lay as many as 16,000 eggs. They live for an average of eight to 13 weeks (6).

The female Enterobius vermicularis has evolved the strategy of exiting the anal opening to deposit the eggs in the folds of perianal skin, the process known as ovipositing. Following ovipositing, female re enter the anal opening. Successful re entry is termed retro infection (8,9). An infested child might wear bed clothing that is sufficiently loose for the eggs to fall away as the host sleeps. If the egg drop away at night, they could be found on sheets or blankets. The eggs are quite light and can be blown about by human activity, wind, or such activities as snapping egg contaminated sheets while making the infested child bed. Inhaled eggs may not enter the lung, due to their weight and size, but may be deposited in the oropharynx, where they are easily swallowed (10).

There are several drugs, which can help to eliminate pinworm. One of the most common drug is mebendazole. It is usually taken in a single dose or perhaps in two doses weeks a part. The whole family must take the medication, otherwise it will not be very helpful. These drugs only kill the adults worms so attention to cleanliness is extremely important (9,10). Recent studies have provided more information about nocturnal enuresis, and generally effective treatment are available (11). It is known that intestinal parasites play an important role in the etiology of enuresis cases. It has been reported that enuresis was one of the shown symptom in enterobiasis (12). In another study, zeyrek et al, investigated the frequency of Enterobius vermicularis in 50 children with Nocturnal enuresis complaints among the ages 5-15 years. Enterobius vermicularis was identified in 33 cases (66%) in their study (13).

In conclusion according to these studies and according to the response of the patient in this report to the treatment with Mebendazole and the cessation of Nocturnal enuresis, confirm an association between Enterobius vermicularis and Nocturnal enuresis. A recommendation to the physicians to inspect about the worm infestations in any case of Nocturnal Enuresis.

References

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