Case Report

Secondary Enuresis Associated with Chorea in a Nigerian Girl

Ibrahim Aliyu

ABSTRACT

Enuresis is a distressing psycho-social disorder. It is often a neglected disorder, and its effect on the psychosocial development of a child is often overlooked, especially in those of low socio-economic status. Its exact pathophysiology is not completely understood, but it has been related to the effect of dopamine in the basal ganglia. However, its association with pediatric autoimmune neuropsychiatric disorder associated with streptococci infection is well-established. But, the case of an 11-year-old Nigerian girl diagnosed with Sydenham's chorea and had secondary enuresis is reported.

Key words: Enuresis, pediatric autoimmune neuropsychiatric disorder associated with streptococci infection, Sydenham's chorea

INTRODUCTION

Enuresis has been defined severally and some quite confusing, but using the current DSM-IV-TR criteria the diagnosis is based on: “the presence of repeated voiding of urine into bed or clothes (whether voluntary or involuntary); this must be clinically significant, manifesting with frequency of at least twice a week for at least 3 consecutive months and there should be presence of clinically significant distress or impairment in social, academic (occupational), or other important areas of functioning; in a patient whose age is at least 5 years (or equivalent developmental level); and this behavior should not be exclusively to the direct physiological effect of substances such as a diuretic or a general medical condition such as diabetes, spina bifida, a seizure disorder”. [1] It is often classified as primary (if the child had never been successfully trained to achieve urination control) or secondary (for those who had initially gained control and then regressed) [2] and may also be daytime or night time enuresis. [3] Enuresis occurs world-wide and is commoner in boys. The prevalence in Nigerian children is varied with rates as low as 6% [4] recorded in the south; 20% [5] in the north and 40% [6] in the southwest. It is often a neglected problem with the child bearing much of the emotional and psychological trauma, which certainly could have negative impact in achieving his/her full potentials. The exact cause of enuresis is not completely understood, but it has been associated with slower physical development, an overproduction of urine at night, a lack of ability to recognize bladder filling while asleep, there may be history of anxiety and family history of bedwetting, which suggests genetic association. [1] Similarly, it has been associated with pediatric autoimmune neuropsychiatric disorder associated with streptococcus infections (PANDAS). [7] However, its occurrence in a case of an 11-year-old girl with chorea is a rare event.

CASE REPORT

An 11-year-old girl was referred for complaint of bed-wetting, which occurred both during day and night for...
1-year before presentation and had affected her social life; she found it difficult sleeping over in peers or relation homes and also schooling. This occurred after she had developed both day/night urinary controls. There was also complaint of her bullying her younger siblings and occasional refusal of school attendance. She was not on any medication known to induce diuresis, and there was no history of urgency, frequency, dysuria, polydipsia, or constipation. This complaint occurred following onset of periods of jerky movement of the limbs, which were described as bilateral and symmetrical, with inability to sit unsupported, weakness with mood swings, and had no loss of consciousness. Enuresis occurred while she was on admission but persisted a year afterward; there was no family history of bed-wetting; both parents were caring and encouraging. She had a referral note with details of her clinical history and the diagnosis of chorea from a tertiary hospital. Her physical examinations were not remarkable. Her urinalysis, random blood glucose, urine microscopy and culture, and abdominal-pelvic ultrasound scan were not remarkable. She had been on oral phenobarbitone and monthly benzathine penicillin prophylaxis, and was chorea-free for 6-months before presentation, but both diurnal/nocturnal enuresis persisted. She is currently on behavioral modification; concentrating on her day time/night time voiding patterns with positive re-enforcement.

DISCUSSION

Chorea is described as an involuntary purposeless jerky movement; it may be primary or secondary. Its association with rheumatic fever is well-established in children and adolescents. The cause of rheumatic chorea is attributed to the effect of anti-brain antibody on a calcium- and calmodulin-dependent protein kinase leading to inappropriate release of striatal dopamine. Similarly in PANDAS, there is increased release of dopamine which probably explains the mechanism of enuresis. Though some similarity exist between Sydenham’s chorea and PANDAS, but absence of obsessive compulsive disorder made PANDAS unlikely in this case. Though enuresis is commoner in PANDAS which poised a diagnostic challenge in this case, but the reported hypotonia, predominance of choreiform movement, emotional liability provided incontrovertible evidence for Sydenham’s chorea in this case.

The index case has remained chorea-free for 6-months since on phenobarbitone and penicillin prophylaxis, which highlights their relevance in management of chorea.

CONCLUSION

Secondary enuresis is associated with Sydenham’s chorea; therefore, it should be actively sort for in the clinical history and evaluation of children with chorea, especially in societies where it is often neglected.

REFERENCES

1. Fritz G, Rockney R. American academy of child and adolescent psychiatry work group on quality issues. Summary of the practice parameter for the assessment and treatment of children and adolescents with enuresis. J Am Acad Child Adolesc Psychiatry 2004;43:123-5.
2. Mikkelsen EJ, Rapoport JL. Enuresis: Psychopathology, sleep stage, and drug response. Urol Clin North Am 1980;7:361-77.
3. Neveu T, von Gontard A, Hoebek F, Hjalmás K, Bauer S, Bower W, et al. The standardization of terminology of lower urinary tract function in children and adolescents: Report from the Standardization Committee of the International Children’s Continence Society. J Urol 2006;176:314-24.
4. Etuk IS, Ikpeme O, Essiet GA. Nocturnal enuresis and its treatment among primary school children in Calabar Nigeria. Nig J Paed 2011;38:78-81.
5. Mbihu NH, Amehe EA, Shehu AU, Wammanda RD. The prevalence of enuresis among primary school children in Zaria, Nigeria. Nigerian J Surgical Res 2005;7:187-90.
6. Adekanmbi AF, Ogunlesi TA, Petuga MB, Oluwole FA, Alabi AD, Kehinde OA. Prevalence and risk factors for enuresis in children. Nigerian Hospital practice 2011;7:3-4.
7. Swedo SE, Leckman JF, Rose NR. From research subgroup to clinical syndrome: Modifying the PANDAS criteria to describe PANS (Pediatric Acute-onset Neuropsychiatric Syndrome). Pediatr Therapeut 2012.
8. Kanazawa I. On chorea: Possible neuronal mechanisms. Clin Neurol Neurosurg 1992;94:S100-2.

How to cite this article: Aliyu I. Secondary enuresis associated with chorea in a Nigerian girl. Indian J Psychol Med 2014;36:324-5.

Source of Support: Nil, Conflict of Interest: None.