Primary monosymptomatic nocturnal enuresis and associated factors in a referral continence clinic of Abu Dhabi

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Abstract

The aim of the present study was to investigate the prevalence of primary monosymptomatic nocturnal enuresis (PMNE) and its associated factors in a major referral centre for nocturnal enuresis in the City of Abu Dhabi. Children referred to the Pediatric Continence Clinic of Department of Pediatric and Urology Surgery at Al Noor Hospital, Abu Dhabi (UAE), between January 2014 and January 2016 for the suspected diagnosis of NE were considered. The inclusion criteria of our study were: age 5-14 years; full medical history and physical examination; urine dipstick to exclude glycosuria and proteinuria; completion of diagnostic urological work-up; final diagnosis of PMNE. Parents were encouraged to follow a program on urotherapy. All children underwent renal and bladder ultrasound, abdominal X-ray and uroflowmetry with electromyography. Constipation was treated, if present. 39 patients had a diagnosis of PMNE. A constipation was present in 17 children (43.6%). Statistical analysis documented a higher incidence of PMNE in the male groups. 38 out of 39 children (97.4%) resolved PMNE, 14 following urotherapy and 24 required medical therapy with desmopressin. Our experience clearly confirms a higher prevalence rate of PMNE in boys than in girls. In the study population, the large intake of dry and reduced-in-fibers foods, the excessive intake of carbonated drinks and the hot climatic condition might negatively influence the incidence of fecal retention and the subsequent PMNE. A multi-modal assessment seems to be effective in the management of PMNE, showing a very high rate of resolution.

Introduction

Acquisition of urinary control is a complex process in which the final stages are usually achieved at the age of 3 to 4 years when the majority of children develop an adult pattern of urinary control.1 According to Diagnostic and Statistical Manual and Mental Disorders (DSM) 5, nocturnal enuresis (NE) is defined as repeated voiding of urine into bed or clothe while asleep in children older than 5 years.2 Even if NE is considered a very common pediatric disorder, the estimated prevalence is highly variable from country to country.

According to its onset, ICCS classified NE as primary or secondary, where the term of primary NE (PNE) includes NE children that have never achieved urinary continence for a period of at least 6 consecutive months, whereas in secondary type NE, the disorders appears after the child has established a period of at least six consecutive months of urinary control.3 Moreover, NE is divided in monosymptomatic nocturnal enuresis (MNE) and non-monosymptomatic nocturnal enuresis (NMNE), the latter associated with any other lower urinary tract symptoms and with a history of bladder dysfunction, in accordance with updated ICCS terminology.4 In this respect, it has been reported that 30-35% of enuretic children have a non-monosymptomatic form.5

NE can be responsible for behavioural, psychological and social problems including embarrassment, blushing, lack of self-esteem and aggression.6 Therefore, identifying children at risk and performing measures are necessary.6 Considering the importance and comorbidities as well as complications associated with NE and at the light of a lack of a comprehensive studies in this regards in the City of Abu Dhabi (UAE), our study aimed to investigate the prevalence of primary monosymptomatic nocturnal enuresis (PMNE) and its associated factors in the paediatric population, in a major referral centre for Nocturnal Enuresis, under the care of a single Consultant.

Materials and Methods

Children referred to the Pediatric Continence Clinic of Department of Pediatric and Urology Surgery at Al Noor Hospital –
City of Abu Dhabi (UAE), between January 2014 and January 2016 for the suspected diagnosis of NE were considered. The inclusion criteria of our study were: age 5-14 years; full medical history and physical examination; urine dipstick test, is not warrant as first line in the assessment of PMNE. In our experience, urotherapy and bowel management resolved PMNE in more than one third of cases and the association with desmopressin was definitive in 97%. We believe that the high rate of resolution of PMNE in our study is related to the pre-assessment investigations (urinalyses, uroflow with EMG, RBUS, abdominal X-Ray) in order to exclude unreported and undiagnosed symptoms and abnormalities. In this regards, even if diagnostic tools, excluding the clinical appraisal followed by a urine dipstick test, are not warrant as first line in the assessment of PMNE, we believe that this strategies carries a greater chance of success. Moreover, because NE affect child’s self image, the relation with peers and parents and schooling, we suggest a more indepth evaluation of the problem, to reduce the incidence of failure and to accelerate the resolution.

Conclusions
In conclusion, it appears that associated factors in Abu Dhabi population are different from those in the studies conducted in other countries. Our experience clearly confirms a higher prevalence rate of PMNE in boys than in girls. A multi-modal assessment seems to be effective in the management of PMNE, showing a very high rate of resolution.

References