

Nocturnal enuresis: the importance of standardizing

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Abbreviations: NE, nocturnal enuresis; ADH, anti-diuretic hormone; PMNE, primary monosymptomatic nocturnal enuresis; SMNE, secondary monosymptomatic nocturnal enuresis; SNMNE, secondary non-monosymptomatic nocturnal enuresis; EMG, electromyography; PFM, pelvic floor muscles; UTI's, urinary tract infections

Editorial

Bedwetting is one of the most common diagnoses for referral to the Paediatric Clinic or to Paediatric Urology. The correct medical term for the condition is: Nocturnal Enuresis. Nocturnal Enuresis (NE) is the involuntary leak of urine, during sleep in a child of 5 years of age or above. Many times the term "Enuresis" is used to identify any time of urine leak during the paediatric age, as a synonym of urinary incontinence. This is not correct. NE can be "Monosymptomatic" or "Non-Monosymptomatic." "Primary Nocturnal Enuresis" means that the condition manifested since the time of toilet training, with no gap of "dry" nights. "Secondary Nocturnal Enuresis" means that there has been at least a gap of 6 month between toilet training and the start of bedwetting. Family History positive for NE or urinary problems, is frequently associated to cases of NE, especially for Primary Monosymptomatic Nocturnal Enuresis (PMNE). The known causes of NE are: reduced secretion of anti-diuretic hormone (ADH), during the night with consequent increased of urine filtration, at night time; bladder overactivity; defect of arousal (the patient is not woken up by the need to pass urinate. The 3 etiopathogenesis can be associated or 2 of them can combine to lead to NE. In some cases of Secondary Nocturnal Enuresis, weather Monosymptomatic or Non-Monosymptomatic (SMNE/SNMNE), tethered cord, emotional trauma, urinary tract abnormalities, should be ruled out. Most cases require simple non-invasive assessment and investigation such as: extended history taking, dry/wet night's charts and bladder diaries, urine analysis + or - urine culture, ultrasound of urinary system with full bladder and post-void residual, urinary flowmetry with electromyography (EMG) of pelvic floor (noninvasive urodynamics). In more complicated and inexplicable cases or in case of known congenital anomalies or congenital medical conditions, more invasive investigation will be required: blood-works for renal function, cystourethrogram, invasive urodynamics (cystometry and pressure/flow study), Nuclear Medicine, cystoscopy, etc. Treatment of NE is based on diet and fluid intake advice associated to re-toilet training, which include timing, posture and pelvic floor relaxation. Second line of treatment is the use of a bedwetting alarm. The most common medication is desmopressin, which usually has an immediate effect, which in most cases only lasts, until the medication

is discontinued. Sometimes due to awareness and maturation, the use of Desmopressin alone, can lead to recovery. Nevertheless, relapses are not uncommon. In case of overactive bladder, anticholinergic medication can be utilized alone or in association with desmopressin and bedwetting alarm. Biofeedback of pelvic floor muscles (PFM), bowel management, in case of associated constipation or treatment with antibiotics, in case of associated urinary tract infections (UTI's), are supportive measures to treat NE. In some cases, constipation and UTI's are the sole cause of the bedwetting. In cases of NE due to constipation the chances of resolving bedwetting after treatment of the bowel issue are above 90% and in case of NE due to UTI's, 85% of cases resolve bedwetting, after recovery from the infection. Many wrong concepts need to be addressed. Nocturnal enuresis is almost never a psychological condition. NE is not the child's fault or the parents' fault. Children should not be reprimanded for suffering from NE. Children will not "grow out" of NE and if so they will with loss of confidence or risk of ridicule and humiliation. We don't need to simply treat NE, we need to teach the children how to resolve it.

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