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## Review article

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## **Enuresis: Nocturnal Enuresis and Diurnal Enuresis**

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#### **Abstract**

The American Pediatric Academy proposed the acceptable definition of enuresis as, the involuntary wetting of clothes or bedding by urine during the daytime or nighttime. The main reasons of enuresis are delay in central nervous system maturation, under capacitated bladder, abnormalities of the urinary tract, nocturnal insufficient antidiuretic hormone secretion and psychogenic factors. Mothers of pediatric with enuresis observed a lower quality of life, in terms of anxiety and depression, more stress and more intensity of pain than mothers of healthy pediatric. Nocturnal enuresis is characterized as the symptoms of intermittent urinary incontinence during sleep, at a minimum age of five yrs, with a minimum duration of three months, and a minimum of one episode per month. Nocturnal enuresis (night time wetting) is more common in boys. Diurnal enuresis can be characterized as unintended urination in a pediatric old enough to have develop control or uncontrolled passing of urine that occurs after age of five yrs and also when a child who is toilet trained has wetting accidents during the day. Diurnal enuresis (daytime wetting (functional daytime urinary incontinence)) is more common in girls.

**Keywords:** Enuresis; Diurnal enuresis; Nocturnal enuresis; Pediatric

#### Introduction

Enuresis can be characterized as involuntary voiding of urine or involuntary release of urine by nighttime or daytime in the absence of injuries of nervous system or urinary tract, occurring at least twice a week for three months; which is more common among school age pediatric and adolescents. Enuresis is also expressed as the voluntary or involuntary wetting of clothes or bedding with urine for a period of at least three consecutive months in pediatric older than five yrs of age [1]. The American Pediatric Academy proposed the acceptable definition of enuresis as, the involuntary wetting of clothes or bedding by urine during the daytime or night-time. The main reasons of enuresis are delay in central nervous system maturation, under capacitated bladder, abnormalities of the urinary tract, nocturnal insufficient antidiuretic hormone secretion and psychogenic factors [3].

The pediatric with primary enuresis have never had a period of being dry in their lives; whereas pediatric with secondary enuresis could start bed wetting again after a minimum six months period of being dry. Bedwetting in itself is pathologically benign and has a high rate of spontaneous remission; it may bring social and emotional stigma, stress and inconvenience to both the individual with enuresis and their families. Pediatric who wet the bed may experience parental disapproval, sibling teasing and repeated treatment failure which may lower self-esteem [4]. The pediatric may

also be at elevated risk of emotional and physical abuse. Many enuretic pediatric wet their beds not; because their bladders are full but because they suffer from nocturnal detrusor overactivity. Indirect evidence for enuresis is the great overlap between nocturnal enuresis and urgency or urge incontinence and the fact that enuretic pediatric particularly the non-polyuric ones void with smaller volumes than non-enuretic pediatric [5]. Both bladder distension and detrusor contractions are strong arousal stimuli. Thus, the bedwetting child can be regarded as a "deep sleeper" almost by definition, which is also supported by the quite universal parental observation that their enuretic pediatric are difficult to wake up. Enuresis might also be a risk factor for the psychological well-being of the parents, particularly the mothers, and can compromise their responsiveness towards the child [6]. Mothers of pediatric with enuresis observed a lower quality of life, in terms of anxiety and depression, more stress and more intensity of pain than mothers of healthy pediatric [7].

There are two types of enuresis; which discussed in turn below.

## **Nocturnal enuresis**

Nocturnal enuresis is characterized as the symptoms of intermittent urinary incontinence during sleep, at a minimum age of five yrs, with a minimum duration of three months, and a minimum of one episode per month. Nocturnal enuresis can be considered as primary (life-long) or secondary (arising after a period without

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bedwetting of at least one year). Primary nocturnal enuresis is the most common form of pediatric nighttime urinary control without a period of six consecutive months. Secondary nocturnal enuresis is the onset of wetting after a continuous dry period of more than six to twelve months which can be caused by such as urinary tract infection, diabetes mellitus, spina bifida and epilepsy [8]. Nocturnal enuresis (night time wetting) is more common in boys. Nocturnal enuresis is a significant developmental problem for school age pediatric and it can cause emotional and social challenges for the child as well as family [9].

#### **Diurnal enuresis**

Diurnal enuresis can be characterized as unintended urination in a pediatric old enough to have develop control or uncontrolled passing of urine that occurs after age of five yrs and also when a child who is toilet trained has wetting accidents during the day. Diurnal enuresis (daytime wetting (functional daytime urinary incontinence)) is more common in girls [10].

#### Conclusion

Enuresis is also expressed as the voluntary or involuntary wetting of clothes or bedding with urine for a period of at least three consecutive months in pediatric older than five yrs of age. Bedwetting in itself is pathologically benign and has a high rate of spontaneous remission; it may bring social and emotional stigma, stress and inconvenience to both the individual with enuresis and their families. Nocturnal enuresis is a significant developmental problem for school age pediatric and it can cause emotional and social challenges for the child as well as family. Diurnal enuresis can be characterized as unintended urination in a pediatric old enough to have develop control or uncontrolled passing of urine that occurs after age of five yrs and also when a child who is toilet trained has wetting accidents during the day.

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## **Competing interests**

The author has no financial or proprietary interest in any of material discussed in this article.

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