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RESEARCH ARTICLE

A PROSPECTIVE STUDY ON ADULT ONSET NOCTURNAL ENURESIS IN FEMALES

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ABSTRACT

Introduction: Nocturnal Enuresis means wetting the bed. Many people wet the bed at night, although few people talk about it. In fact, one person in every 100 may be affected throughout adult life. Most people think that no one else has this problem. Many people never seek help because they are too embarrassed. Nocturnal enuresis is common in older community dwelling women with urinary incontinence. It may serve as a marker of fall risk even in women who do not seek care for urinary symptoms.

Aim of the study: To analyze the causes of adult onset nocturnal enuresis in female inpatients and outpatients and utilize these results, for proper management of nocturnal enuresis at an early stage.

Materials and Methods: The study was a prospective study conducted from January 2016 to June 2017 in the institute of urology, madras medical college, Chennai. This was a study involving 600 women and the inclusion criterion was women aged ≥ 18 years. The data included are patient's age, ambulatory status, medical and surgical history, classes of taking drugs, and urinary tract infection and menopausal status. The results were analysed statistically using appropriate methods.

Observations and results: The mean age of the women was 47.5 years. The prevalence of adult-onset nocturnal enuresis was 60/500 (12%), and this increased significantly with increasing age and history of previous surgery (e.g., hysterectomy). The patients taking cardiac drugs were 15 and diuretics 8. Urinary tract infection was identified in 22 patients. 18 patients were bed ridden. Diabetes mellitus was found in 36 patients.

Conclusion: The overall prevalence of adult onset nocturnal enuresis was 12% amongst female inpatients and outpatients in the urology department. Childhood bedwetting is considered an indicator of developmental problems with the bladder itself, whereas bedwetting in adults suggests an underlying medical condition that requires medical evaluation and, potentially, treatment.

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INTRODUCTION

Nocturnal Enuresis means wetting the bed. Many people wet the bed at night, although few people talk about it. In fact, one person in every 100 may be affected throughout adult life. Most people think that no one else has this problem. Many people never seek help because they are too embarrassed. Nocturnal enuresis is common in older community dwelling women with urinary incontinence. It may serve as a marker of fall risk even in women who do not seek care for urinary symptoms.

MATERIALS AND METHODS

The study was a prospective study conducted from January 2016 to June 2017 in the institute of urology, madras medical college, Chennai.

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RESULTS AND OBSERVATIONS

The mean age of the women was 47.5 years. The prevalence of adult-onset nocturnal enuresis was 60/500 (12%), and this increased significantly with increasing age and history of previous surgery (e.g., hysterectomy). The patients taking cardiac drugs were 15 and diuretics 8. Urinary tract infection was identified in 22 patients. 18 patients were bed ridden. Diabetes mellitus was found in 36 patients

DISCUSSION

Nocturnal Enuresis means wetting the bed. Many people wet the bed at night, although few people talk about it. In fact, one

person in every 100 may be affected throughout adult life. Most people think that no one else has this problem. Many people never seek help because they are too embarrassed. Some people wet the bed regularly all their lives. Others grow out of this during childhood but start again later in life. Nocturnal enuresis causes many practical problems, such as constantly having to change wet sheets and bedding. Nocturnal enuresis can affect staying away overnight, going on holiday or business trips. Nocturnal enuresis can affect sleep patterns and often it causes frustration and exhaustion. Nocturnal enuresis can also affect self-esteem which can put a strain on personal relationships. Nocturnal enuresis is common in older community dwelling women with urinary incontinence. It may serve as a marker of fall risk even in women who do not seek care for urinary symptoms.

Age group(y)	total no of patients (n=60)
<20	2
20-30	9
30-40	11
40-50	18
>60	20

Parameters	total no of patients
Post menopausal status	40
Bladder infection	22
Diabetes mellitus	36
Sleep disturbances	50
Medications	33
History of hysterectomy	17
Small bladder capacity (150ml)	8
Marital status	42
Neurological disorders	13

Types of nocturnal enuresis

Primary Nocturnal Enuresis is a fairly common condition in young children and is seen as a sign of an immature, developing bladder. It is estimated that 15% of children over three, and 10% over five wet the bed occasionally. In fact, most doctors don't consider bedwetting in children to be a sign of a problem unless the child is older than seven years old, or the child has begun wetting the bed again after six months of maintaining overnight bladder control. Persistent Primary Nocturnal Enuresis is a condition which starts during childhood, where night time dryness has not been achieved for longer than six months. About 2 – 3% of adults over 18 years of age have this type of nocturnal enuresis. Adult Onset Secondary Enuresis is defined as nocturnal enuresis in which night time dryness has been achieved at some point in life. Dryness may have occurred for many years but then night time wetting suddenly begins at an older age. However, when adults wet the bed it is often an indication of an underlying illness, disease, or a symptom of other untreated medical conditions.

Causes of adult female nocturnal enuresis genetic

Research has shown that nocturnal enuresis can occur due to a genetic link. Though this is not true for everyone, evidence has shown that bedwetting is hereditary. One study showed that someone with two bedwetting parents has a 77% chance of also becoming a bed wetter. When one parent wet the bed as a child, then their child was found to have a 40% chance of becoming a bed wetter.

MEDICATIONS

These medications include hypnotics, insomnia medications, psychiatric medications and common drugs used for heart and

blood pressure problems, or for mental illness and anxiety. The amount and type of drinks consumed by the person also is important. We all need fluids to stay healthy, but some drinks can irritate the bladder or make the body produce urine more quickly than usual. Alcohol, and drinks that contain caffeine (such as tea, coffee, hot chocolate and cola), can affect the person in these ways.

SMALL BLADDER CAPACITY

Another cause put forward for primary nocturnal enuresis is a smaller than average bladder. This does not mean that the actual size of the bladder is smaller in nocturnal enuresis patients rather that their functional bladder capacity is a smaller volume. The functional bladder capacity is the amount of urine the bladder holds before sending a signal to the brain to indicate the need to void. The over activity of the detrusor muscle (bladder) indicate that the muscle is never fully relaxed during the filling phase and therefore the bladder capacity is not as large.

OVERACTIVE BLADDER

Some people have an 'overactive' or 'unstable' bladder which causes problems at night as well as during the day. Several studies have found a high incidence of detrusor instability with nocturnal enuresis. Detrusor over activity has been found in up to 70 – 80% of primary nocturnal enuresis patients.

- Diabetes
- Kidney diseases
- Bladder cancer
- Neurological disorders
- An imbalance of the antidiuretic hormone
- Constipation
- Bladder infection
- Stress, anxiety, fear, and other psychological issues

Stress or anxiety can also cause the problem, which might last long after the stress has gone

OBSTRUCTIVE SLEEP APNEA

Patrick Koo, MD, assistant professor of medicine at Alpert Medical School of Brown University, and his colleagues analyzed data from 161,808 postmenopausal women who were part of the Women's Health Initiative study. They found that the more traditional risk factors a woman had for obstructive sleep apnea, the more likely she was to also urinate during her sleep. In fact, women who had all six obstructive sleep apnea risk factors included in the study—obesity, frequent snoring, restless sleep quality, sleep fragmentation, daytime sleepiness and high blood pressure—were *seven times* more likely to also wet the bed than women who had no risk factors. Here's a likely explanation of *how* it happens. With obstructive sleep apnea, the soft tissue around the airway closes up when person relaxes during sleep, so person are gasping for air. "This 'sucking' motion causes the heart to stretch and release a protein that increases urine production," explains Dr. Koo. Combine that with changes in the urinary tract in postmenopausal women, which make it easier to leak urine when the bladder is full, and the result can be bed-wetting during sleep. Bed-wetting is embarrassing, of course, but it could be a positive thing if it helps more women discover that

they have obstructive sleep apnea, which robs the body of oxygen during sleep, contributing to high blood pressure, heart attack, stroke and early death. Studies show that women tend to underreport common symptoms to their doctors, such as snoring, fatigue or frequent awakenings to urinate. "Either they're embarrassed to tell others that they snore or wake up multiple times a night to urinate, or they're not aware that these are symptoms of obstructive sleep apnea," says Dr. Koo. Worse yet, the obstructive sleep apnea symptoms women may bring up to their physician, such as sleeping problems or low energy during the day, are often misdiagnosed. Doctors tend to assume they're signs of depression or insomnia, which are more common in women than in men. For these reasons, too many women aren't getting the treatment they need for a dangerous health condition—especially after menopause, when the incidence of sleep apnea jumps in women. It's estimated that 2% of women have the condition, but in reality, the incidence is very likely higher, especially after menopause.

Conclusion

The overall prevalence of adult onset nocturnal enuresis was 12% amongst female inpatients and outpatients in the urology department. Childhood bedwetting is considered an indicator of developmental problems with the bladder itself, whereas bedwetting in adults suggests an underlying medical condition that requires medical evaluation and, potentially, treatment. Adult patients need to be encouraged to be open about this condition and to be aware that their issues with urinary incontinence at night are not typically voluntary or the result of personal weakness on their part.

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