

In the name of God



S.U.M.S.

Department of Internal Medicine

Shiraz E-Medical Journal

Vol. 8, No. 1, January 2007

<http://semj.sums.ac.ir/vol8/jan2007/enuresis.htm>

Frequency of Enuresis in (5-10) Year Old Children in Tafila, Jordan.

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Received for Publication: October 10, 2006, Accepted for Publication: November 25, 2006.

Abstract:

Objective: To estimate the frequency of enuresis in 5-10 year old Tafila children and to examine the factors associated with it.

Material and Methods: Across sectional study done in Tafila at Prince Zeid Hospital pediatric clinic for children 5-10 year old visiting it through asking the parents of 1000 children of whom 700 children completed the questionnaire which included items about age, sex, frequency of daytime and nighttime bed wetting, family history, strategies taken by parents to solve the problem and some socio-demographic factors associated with enuresis from January 2005- January 2006. Frequency tables and descriptive statistics were analyzed using the SPSS for Windows version 10 software program.

Results: The response rate to the questionnaire was 70%(700/1000).The frequency of enuresis was 8.8%,mostly wetting >3 nights/wk 25(40.3%), male: female ratio was 1.58:1, Poor economic status of the family and low maternal education are important factors in enuretic children, and children concern to solve the problem is better than the parents(62.9%)vs.(37.1%).

Conclusion: The frequency of enuresis among Tafila children is 8.8% and is associated mostly with male gender, positive family history, poor socio- economic status, mother education and poor parents concern.

Key Words: Urinary Frequency, nocturnal enuresis, factors.

Introduction:

It is wise to conduct a study to estimate the frequency of nocturnal enuresis in 5-10 year old children and to examine the factors associated with it in Tafila, south of Jordan because of lack of similar studies in the region as seen in the information below from different parts of the world. Enuresis is defined in many different ways, but the common thread to all involves a lack of bladder control beyond 5 years age, an age when most children would be expected to have control.⁽¹⁾

Nocturnal enuresis is a common problem that can be troubling for children and their families. Recent studies indicate that nocturnal enuresis is best regarded as a group of conditions with different etiologies.⁽²⁾

A study in UAE confirms the fact that enuresis is a common problem among healthy school children in the UAE and that it is associated with behavioral disturbance.⁽³⁾ Bedwetting (nocturnal enuresis) is common. It occurs in up to 20% of 5 year olds and 10% of 10 year olds, with a spontaneous remission rate of 14% per year.

Weekly daytime wetting occurs in 5% of children, most of whom (80%) also wet the bed. Bedwetting can have a considerable impact on children and families, affecting a

child's self-esteem and interpersonal relationships, and his or her performance at school.⁽⁴⁾

Materials and Methods:

A cross sectional study done in Tafila, Jordan at Prince Zeid Hospital pediatric clinic for children 5-10 year old visiting it through asking the parents of 1000 of whom 700 children completed the questionnaire which included items about age, sex, frequency of daytime and nighttime bed wetting, family history, strategies taken by parents to solve the problem and some socio-demographic factors associated with enuresis from January 2005 to January 2006. Frequency tables and descriptive statistics were analyzed using the SPSS for Windows version 10 software program. Frequency rates were compared to available data on national averages and trends then comparing to none bedwetting participants ($p < 0.05$)

Results:

Over all corrected response rate to the questionnaire was 70% (700). Enuresis was present in 62 (8.8%) children. It was most common in children of 6 years (25.5%) as shown in Table 1. Of the 62 children, 17 (27.5%) were bed wetting every

night, 20 (32.3%) were bedwetting more than three nights every week and 25 (40.3%) were bedwetting less than three nights every week (Table 2). Boys and girls in our sample with enuresis were 61.3% (38) and 38.7% (24) respectively. Primary enuresis was seen in 59.7% while secondary enuresis in 40.3% and positive family history seen in 66.2% as shown in Table 3. Only 34 (54.8%) children seek medical attention in the past for this enuresis. Parents of 23 (37.1%) children reported concern for the problem while 39 (62.9%) children were also concerned about their problem of enuresis. Poor economic status of the family and low maternal education are important factors in enuretic children (Table4).

Table 2, Bedwetting Frequency

Frequency	Number (%)
No or <2/mo	638 (91.2)
Every night	17 (27.3)
>3 nights /wk	20 (32.2)
<3 nights /wk	25 (40.3)

Table 3: Distribution of Enuresis by gender, type and family history

	Diurnal Enuresis	Nocturnal Enuresis	Total
	Number (%)	Number (%)	Number (%)
Male	20 (67.7)	18 (65.2)	38 (61.3)
Female	10 (33.3)	14 (34.8)	24 (38.7)
Primary	16 (53.3)	21 (65.6)	37 (59.7)
Secondary	14 (46.7)	11 (34.4)	25 (40.3)
Positive FH	17 (56.7)	24 (75)	41 (66.2)
Negative FH	13 (43.3)	08 (25)	21 (33.8)

FH: family history of enuresis

Table1. Age distribution of children with enuresis.

Age in years	Children: Number (%)
5	12 (19.4)
6	13 (20.9)
7	16 (25.8)
8	11 (17.8)
9	7 (11.3)
10	3 (4.8)

Table4. Enuresis in relation to social issues:

Social issue affecting enuresis:	Number (%)
Mother education:	
Illiterate or primary incomplete	05 (08.1)
Primary complete	30 (48.3)
Secondary complete	16 (25.8)
High school or higher education	11 (17.8)
Family economic status:	
Poor	29 (46.8)
Middle	20 (32.3)
Good	13 (20.9)

Discussion:

Nocturnal enuresis is a benign condition, yet needs treatment to relieve the child and parents of the accompanying anxiety and the stigma attached to it. It is defined as normal nearly complete evacuation of the bladder at a wrong place and time at least twice a month after the fifth year of life. The underlying cause of enuresis is functional and various proposed pathophysiological mechanisms like maturational delay, genetics, role of sleep, antidiuretic hormone, and bladder capacity are discussed.⁽⁵⁾

The short-term success rate of full-spectrum therapy for NE is high. Age, gender, sleep arousal, bladder capacity, family history and pathophysiological profile of enuresis are unrelated to the success of the intervention.⁽⁶⁾

Nocturnal enuresis is still perceived as a shameful condition and kept as a secret. But there is nothing shameful about bedwetting. It is caused by a delay in maturation of the somatic mechanisms responsible for sleeping dry all night. This delay is most often hereditary in nature. With few exceptions, nocturnal enuresis is not caused by psychosocial factors; but it generates psychological problems for the child, especially evident as a deterioration

of self-esteem.⁽⁷⁾

Recent demographic studies report a prevalence of nocturnal enuresis in at least 5-10% of six to seven year old children, most often boys.⁷ Bedwetting (nocturnal enuresis) is common. It occurs in up to 20% of 5 year olds and 10% of 10 year olds. Weekly daytime wetting occurs in 5% of children, most of whom (80%) also wet the bed.⁽⁴⁾

The prevalence of enuresis was 4.2% and that of nocturnal enuresis was 3.9%. The prevalence declined with increasing age from 10%, 5.3%, 3%, and 1.2% at ages 5, 7, 10, and 12 years, respectively. There was no enuretic child at ages 13 through 15 years. The prevalence of bed-wetting was slightly more frequent in females than males. Nocturnal enuresis was also found to be significantly associated with the history of encopresis and positive family history of enuresis.⁽⁸⁾

The overall prevalence of nocturnal enuresis in urban Malaysian children is 8% using the ICD-10 criteria. This appears to be similar to that of Korea and Taiwan but lower than that reported from in the USA, England, Ireland, Turkey and Australia.⁽⁹⁾

PNE was reported in 92 (8%) of the children; nine (10%) of these children were wet >3 nights per week. Factors associated with PNE included male gender, deep sleep,

divorced parents or separated family and a positive family history of enuresis.⁽¹⁰⁾

Thirty-two out of the 400 children (8%) surveyed, reported wetting the bed at least once per week. More boys were affected than girls, and 90% of those with enuresis were aged 6-11 years.⁽³⁾

In our study the prevalence was (8.8%) close to that seen in United Arab Emirates⁽³⁾, and more than that seen in Bristol UK.⁽¹¹⁾ In our study factors associated with nocturnal enuresis included male gender, positive family history, poor socioeconomic status, mother education and poor parents concern except for some traditional ways of dealing with enuresis mostly by voiding before bedtime and waiting for maturity, so in the next future we stressed the idea of doing an international survey to assess the prevalence in the whole country and to do more trials to assess the most cost effective management strategy. We conclude that enuresis is common in Tafila, Jordan and associated with many factors that needs reassessment.

Acknowledgement:

We would like to thank the registration department in Prince Zeid Hospital, Pediatric clinic staff and Dr. Ahmed At wan from Jordan University for helping us analyzing the data.

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