AIN SHAMS UNIVERSITY
Institute of Post Graduate Childhood Studies
Medical Department

PREVALENCE OF ENURESIS IN PRIMARY SCHOOL CHILDREN IN EAST REGION OF CAIRO

Thesis

Submitted in Partial Fulfilment of
M.Sc. Degree of Childhood Studies
(Medical Department)

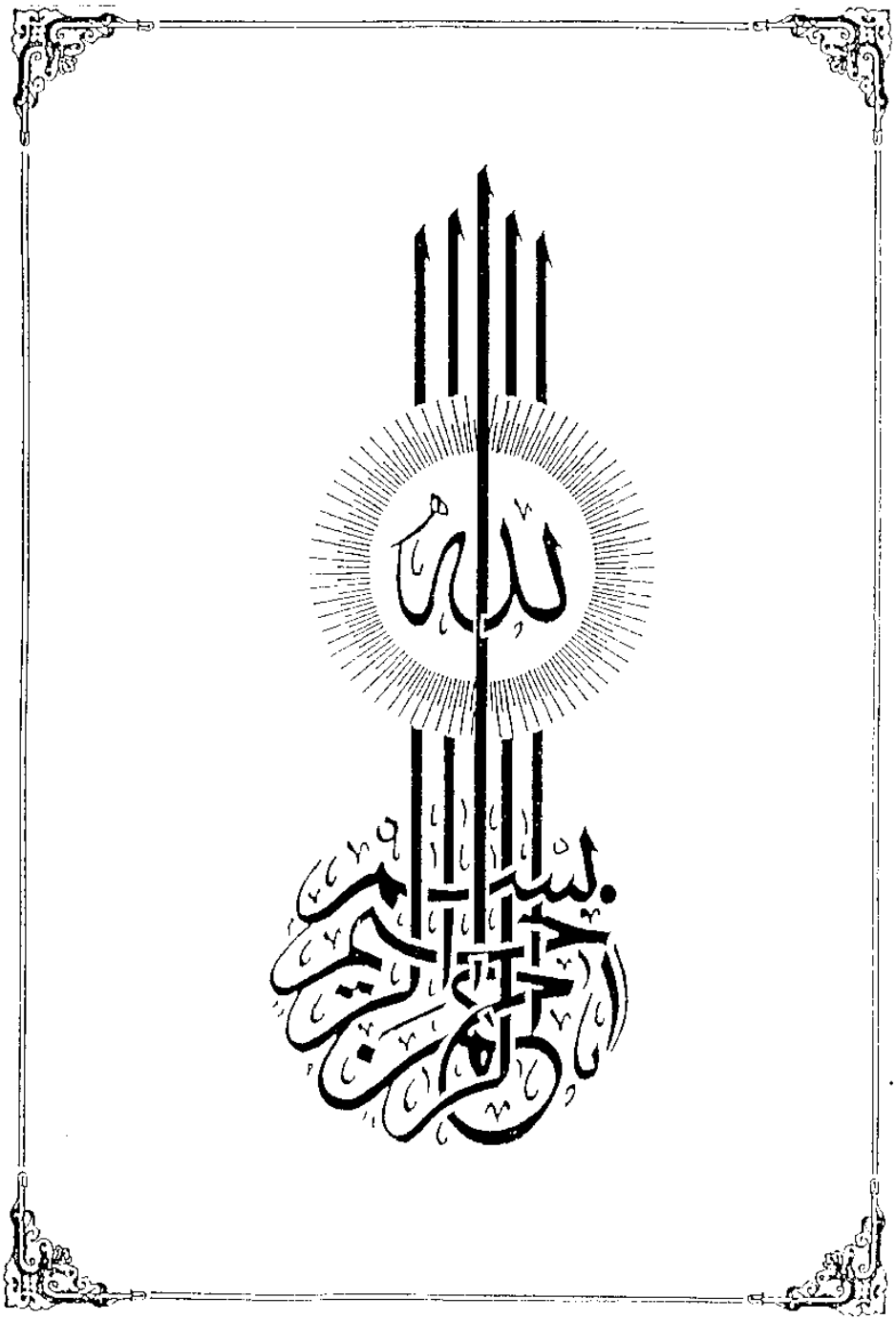
By
Khaled Mohamed Salama
M.B..B.Ch.

Supervised By:

Prof. Dr. Afaf Hamed Khalil
Ass. Professor of Psychiatry
Faculty of Medicine
Ain Shams University

Dr. Olwya Abdel Baky
Lecturer of Childhood Studies
Medical Department
Ain Shams University

1992



DISCUSSION AND JUDGMENT COMMITTEE

The vice-president for higher studies and research of Ain-Shams University has approved to form the following committee for the discussion of Mr.....

1. Prof. Dr. Zeinab Risky .....
   Prof. of Psychiatry ..... Chairman .....
2. Prof. Dr. Ahmed Khashaba .....
   Prof. of Pediatric ..... Member .....
3. Prof. Dr. Afaf Ahmed Khalil .....
   Ass. Prof. of Psychiatry. Member .....
4. .....
   ..... Member .....

ACKNOWLEDGMENT

First of all, I would like to thank **God.**

Then, I wish to express many greatest thanks to Prof. Dr. **Afaf Hamed Khalil**, *Ass. Professor of Psychiatry Faculty of Medicine, Ain Shams University, for her generous supervision, valuable help and revision of this thesis.*

I am deeply grateful to Dr. **Olwya Abdel Baky**, *Lecturer of Childhood Studies, Medical Department, Ain Shams University for suggesting the point of this research, unlimited patience and generous help.*

I would like to thank all teachers and families of children of primary schools in Berka region of East Cairo for their great assistance and friendly attitude.

I am greatly thankful to my parents and my wife for their help, love and support.

CONTENTS

INTRODUCTION AND AIM OF THE WORK

INTRODUCTION AND AIM OF THE WORK

Enuresis is a common symptom that influences a child's social life in many ways and will cause feeling of uncertainly and inferiority. The prevalence of night wetting has been shown to vary over a very large range in different populations, from 2.3% to 25%. The main reason for the wide variation in the prevalence is the very few prevalence studies. *(Jarvelin et al, 1988)*

Most children with enuresis are regarded as not substantially different emotionally from other children, but the disorder itself may act as a chronic stressor and, if persistent, have adverse effects on the child's personality. *(Moffatt et al., 1987).*

Childhood enuresis can indicate underlying problems as benign as physical immaturity or as serious as urinary tract obstruction or psychiatric disturbance. Although generally a benign symptom, it causes considerable distress to both parents and child., the prevalence of bed-wetting declines with age and is generally higher among boys than girls. *(Foxman et al., 1986).*

Enuresis is often familial, usually disappearing in adolescence, with only 1 per cent of children suffering from it into adulthood. *(Novello, 1987).*

Many psychiatrists maintain that enuresis is entirely a psychological problem, while many paediatricians hold that there are two types of enuresis, primary and secondary, the primpary kind is that in which the child has never been dry at night, and the secondary variety in which the child is dry for a period of months or years and then begins to wet the bed. They feel that the primary type usually has an organic basis. ***(Illingworth, 1988).***

Children with no other primary underlying condition causing enuresis generally are very sound sleepers and often have rather small bladder capacities. They fail to awaken to the sensation of bladder fullness, which inevitably occurs. ***(Burg et al., 1990)***

About 85% of enuretic children wet only at night, with the remainder wetting both day and night. The male to female ratio in enuresis is 3:2 significantly. ***(Burke, 1983).***

Only when the presence of enuresis interrupts the sequence of normal social, emotional, cognitive, or motor development, should the use of medication or devices be considered. ***(Novello, 1987).***

Aim of the WorK

Enuresis probably is considered one of the most important porblems affecting children at the age of 5-12 years, the total number of school children in Egypt at that age was 7,343,716 in the school year 1988-1989.

Scott et al., 1982 stated that the incidence of enuresis may be as high as 25%, so we can expect the magnitude of children suffering from enuresis.

This study is planned to determine the overall prevalence of enuresis among primary school children in the Berka region of East Cairo. Also study the possible etiological factors that may precipitate this disease.

It is also important to throw light on enuresis impact and to study the relation between enuresis and level of intellegenece and the academic achievement.

REVIEW OF LITERATURE

HISTORICAL ACCOUNT

Enuresis, though known to have existed through the ages as an annoying and vexing disorder of childhood, is still only partially understood. Efforts to treat enuresis medically were recorded as early as 1550. B.C.

Also, paul of Aegina, the last of the great Byzantine compilers, left us with his writings, one in incontinence of urine. ***(Burke, 1983).***

The word enuresis is derived from the greek "enouren" which means to void urine. ***(Mikkelsen et al., 1980).***

In England in 1545, Thomas Phayer, the father of english pediatrics, published the first edition of his book of children, he provided a paragraph entitled of wetting in the bed. ***(Burke, 1983).***

Enuresis was explained as being due to carbonic acid posining in mouth breathing children by Major and Ziem, 1871. ***(Salmon, 1975).***

Ruddock (1878) (Salmon, 1975) thought that hypertrophy of the bladder musculature with increased contractility might be responsible, while Trousseau, (1870) desputed this, putting the underlying pathology down to phimosis which resulted in reflex contraction of the bladder. In 1880 Simmons, (Salmon, 1975), thought that preputial adhesions causes

irritation and that by removal of them he might promote a cure. Circumsicion was thus advocated as a treatment of enuresis.

In the 19th century, it was recognised that enuresis had a familial tendency, and children who were heavy sleepers were believed to have enuresis more frequently than those who where not. Deep sleep was believed to produce atony of the vesicle sphincter and loss of voluntary control. Phimosis was regarded a possible cause, food and drink causing acid urine were believed to be factors, as were internal parasites (especially Ascaris), over loaded stomach or bowel, contracted urinary meatus. *(Burke, 1983)*.

That finding confirmed what a long history had always indicated, namely, that no one has known what caused enuresis or how to manage it to achieve consistent success.

Today more is known about its causes and treatment possibilities, but enuresis still defies medical experts. The ubiquity and frequency of this minor malady oblige it to be considered one of the most important pathologies of childhood. *(Pierce, 1971)*.

Anatomical Aspect of Bladder Function

The wall of the bladder contains many layers of smooth muscle fascicles separated by fibrous tissue. Bladder motor function represents the summation of individual smooth muscle activity which could be classified into:

1. ***Detrusor muscle:***

It is the most important muscle for micturition, which is responsible for empting the bladder through contraction. It is arranged in inner longitudinal, middle circular, and outer longitudinal layers have proved on close dissection to be over simplified descriptions ***(Hunter, 1954).***

Tanagho & Smith's (1966) found that the outer longitudinal layer is divided into three bands: Anterior, posterior and oblique, the anterior and lateral groups loop around the urethra and ***(Van Den Buluck et al., 1970)*** demonstrate that the inner longitudinal detrusor coat is an irregularly arranged network of muscle fibres ***(Van Den Buluck et al., 1970).***

Hence the sphincteric function of the detrusor around the three orifices of the bladder is due to its peculiar arrangement around them providing, functionally, an optimum competent mechanism that varies according to the degree of distension of the organ ***(Chusid, 1985).***

II. ***The trigonal muscle:***

The trigonal musclature consists of two muscular layers that are superimposed upon the detrusor muscle.

a. ***The superficial layer:***

This layer is a direct continuation of the ureter and is formed by union of the longitudinal fibres in the roof and the floor of the intravesical ureter as these fibres continue uninterrupted into the trigone. *(Tanagho and Meyes, 1969).*

b. **The deep layer:**

The second trigonal layer (the deep trigone) is a direct continuation of the Waldeyer's sheath, a fibromuscular structure that completely encircles the distal 3 to 4 cm of the juxtavesical ureter. that run downward deep to the superficial trigon (Woodburne, 1964).

III. ***The base plate of the bladder:***

Hutch (1965-1967 and 1971) introduced the concept of the base plate in describing the bladder neck. His concept was that the base plate is primarily a flat structure that encircles the internal uretheral meatus. The fibres of the middle circular layer begin to thicken at the region of the neck, the most caudal of these concentric rings form the true bladder neck. These rings are complete anteriorly and laterally but deficient posteriorly as the deep trigone interrupts it. During filling, the floor of the bladder remains flat ; the internal sphincter is closed. The tissue that