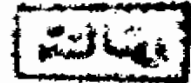


AIN SHAMS UNIVERSITY
INSTITUTE OF POST-GRADUATE CHILDHOOD STUDIES
MEDICAL DEPARTMENT

MEDICAL AND PSYCHOLOGICAL PRESENTATIONS
OF DIABETES MELLITUS AMONG CHILDREN AGED
FROM "6" TO "14" YEARS



THESIS

SUBMITTED IN PARTIAL FULFILLMENT
FOR MASTER DEGREE OF CHILDHOOD
STUDIES



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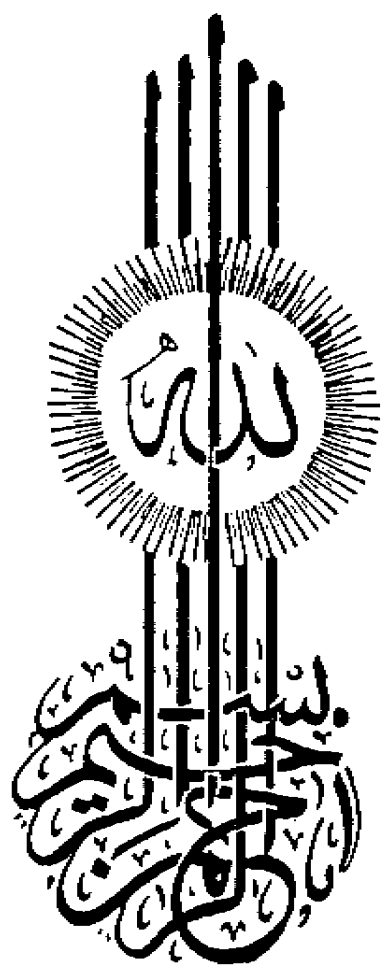
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To

My Mother ...

AIN SHAMS UNIVERSITY

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Abbreviations used :

IDDM = Insulin dependent diabetes mellitus

Exp. = Experimental

S.D. = Standard deviation

Prob. = Probability



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INTRODUCTION AND AIM OF THE WORK

INTRODUCTION AND AIM OF THE WORK

Diabetes mellitus is the commonest endocrinal and metabolic disease in childhood (Drash, 1975 and Tattersal and Fohnston, 1981).

IDDM has been estimated to occur at a frequency rate of approximately 1.3 per 100 children under 17 years in United States (Drash, 1979). This figure is similar to that reported by Gorwitz et al., (1979) among school children in Michigan.

Diabetes includes a number of problems to which psychological investigations and procedures are pertinent. These include aetiology, psychological impact and adjustment to the disease, family dynamics and psychological programs to aid diabetes management. In most of these areas, research has been limited and its results are only suggestive. Stress appears to influence metabolism directly and indirectly. In addition, research should focus on psychological factors related to metabolic control, rather than searching for features distinguishing diabetics from normals. (Fisher E. B., et al., 1982).

For these reasons, this work is devoted to study the presentations of IDDM and to clarify the role of the psychological and social factors on metabolic control of IDDM.



REVIEW OF LITERATURE

DEFINITIONS AND CLASSIFICATION OF DIABETES MELLITUS

Definition :

Diabetes mellitus is a syndrome which can involve any or all of a long list of symptoms and clinical laboratory findings which show a variable response to therapy. In the complete syndrome, four general areas are affected and these should be considered in making a clinical diagnosis :

1. Hyperglycemia with accelerated fat and protein catabolism.
2. Large-vessel disease : atherosclerosis and medial calcification.
3. Micro-vascular diseases : thickness in the capillary basement membrane with abnormal function.
4. Neuropathy : which comprises peripheral sensory and motor defects, autonomic nervous system dysfunction, segmental dysfunction and abnormalities of Schwann cells (Porte et al., 1981).

Classification of diabetes mellitus :

The national diabetes data group (NDDG) of the N.I.H., U.S.A, set up an international workshop (1979) to develop a nomenclature and classification system for diabetes mellitus.

Table (1) shows classification of diabetes mellitus (Report of the National commission on Diabetes 1975).

Table (2) shows the clinical characteristics of the two major types (IDDM and NIDDM). With few exceptions, diabetes in children is of the insulin-dependent variety previously called "Juvenile diabetes mellitus" (Sperling, 1979).

Recent research advances, both in the field of diabetes mellitus and related basic sciences such as genetics, immunology and virology has shed new light on factors which are likely to be involved in the pathogenesis of IDDM, these factors include environment (e.g. viruses or toxins), heredity and immunologic reactivity.

Table (1): Classification of Diabetes Mellitus

Traditional clinical classification (with Alternate Nomenclature)	NIH Diabetes Data Group classification
1. Juvenile-onset-type Diabetes (JOD) :-	1. Insulin-Dependent Diabetes Mellitus, type I (IDDM).
a. Ketosis-prone diabetes.	
b. Juvenile-onset diabetes.	
c. Severe diabetes.	2. Non-Insulin-Dependent Diabetes Mellitus, type II (NIDDM) :
d. Brittle diabetes.	- Non-Obese NIDDM.
2. Maturity-onset-type Diabetes (MOD) :-	- Obese NIDDM.
a. Adult-onset diabetes (AOD).	3. -ve
b. Ketosis-resistant diabetes.	4. Gestational Diabetes.
c. Mild diabetes.	5. Diabetes Mellitus and Impaired glucose tolerance associated with other cond- itions.
d. Obesity hyperglycemia.	6. Diabetes Mellitus secondary to congen- ital insulin receptor deficiency.
e. Maturity-onset diabetes.	7. Diabetes Mellitus secondary to insulin receptor antibody.
f. Stable diabetes.	8. Diabetes Mellitus secondary to familial Autoimmunity.
3. Maturity-onset-type Diabetes in the Young (MODY):	
a. Familial maturity diabetes.	
b. Maturity-onset diabetes of youth.	
4. Gestational Diabetes.	
5. Secondary Diabetes.	
6. Congenital Insulin Resistance with Acanthosis Nigricans.	
7. Acquired Insulin Resistance with Acanthosis Nigricans.	
8. Familial Autoimmune Diabetes.	

Diabetes 28 : 1039-1057, (1979)

NIH = National Institute of Health.