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STUDY OF THE PREVALENCE OF ISLET CELL ANTIBODIES (ICA) IN PATIENTS WITH INSULIN DEPENDENT DIABETES MELLITUS AND THEIR RELATIVES

Thesis

Submitted to the Faculty of Medicine,
Menoufyia University,
for partial fulfillment for the master degree in

CLINICAL PATHOLOGY

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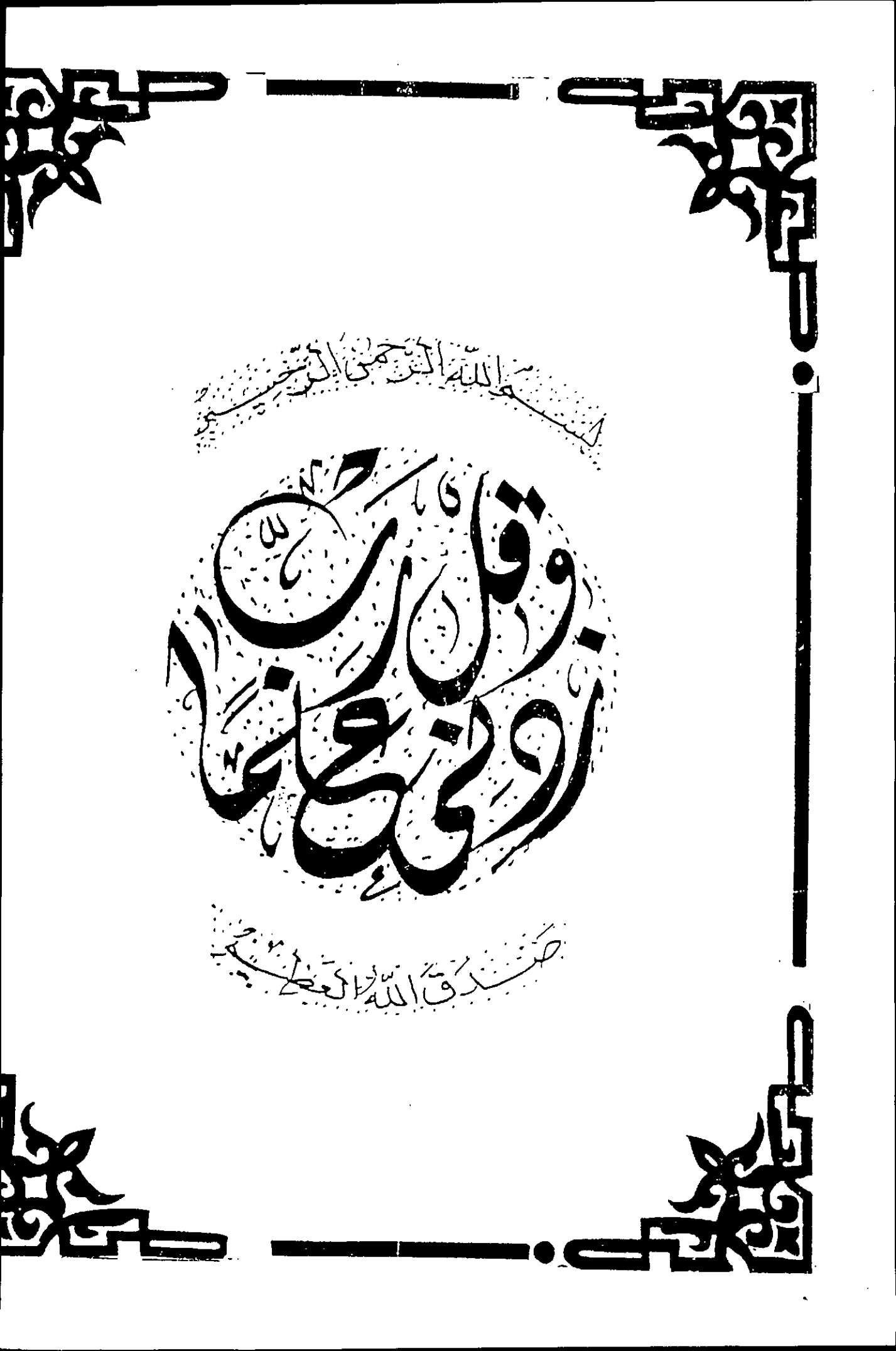
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LIST OF ABREVIATIONS

DM	Diabetes mellitus
IDDM	Insulin dependent diabetes mellitus
ICA	Islet cell antibodies
AD	After date.
WHO	World Health Orgnization
OGTT	Oral Glucose tolerance test.
PP	Post prandial
Na^+	Sodium ions
NDDG	National Diabetes data group
IGT	Impaired Glucose Tolerance
Pre AGT	Previous abnormality of glucose Tolerance
Post AGT	Potential abnormality of glucose Tolerance
NIDDM	Non Insulin dependent diabetes mellitus
HLA	Human Leucocytes Antigens.
IAA	Insulin Autoantibodies
Mr	Molecular weight
ICSA	Islet cell surface antibodies.
CF-ICA	Complement fixing islet cell antibodies
IFT	Indirect Immunofluorescent Technique
IFA	Indirect Immunofluorescent assay
ICFT	Immunofluorescent complement fixation
PA	Protein A
RIA	Radio-Immuno assay

ELISA	Enzyme linked immuno-sorbent assay.
TP	True positive
TN	True negative
FN	False negative
FP	False positive
ROC	Receiver operating characteristic curve
DPR	Differential positive rate plot.

LIST OF FIGURES

INTRODUCTION

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Diabetes mellitus (DM) is a chronic metabolic syndrome that results in a disturbance of glucose metabolism with concomitant disorder of fat, protein, water and electrolyte balance.

Although insulin dependent diabetes mellitus (IDDM) is most frequently diagnosed in subjects under 20 years of age, IDDM may occur at any other age as there is, infact, a second incidence peake at the age of 40 **(Olsson et al, 1992)**

Despite improvement in treatment, mortality and morbidity remain considerably greater among diabetic than non diabetic population. Accordingly, prevention and early diagnsis of IDDM is therefore a logical goal **(Tran et al., 1988)**

Islet cell antibodies (ICA) have been recognized early for months or years, before clinical onset of IDDM. Furthermore, first degree relatives of people with type I diabetes also frequently have ICA in their sera in a prediabetic stage. Therefore, the presence of ICA has been useful as relatively simple, non