ESTABLISHED AND RECENT LABORATORY TESTS IN DIAGNOSIS OF RHEUMATOID ARTHRITIS

ESSAY

Submitted for partial fulfillment of
Master Degree (M.Sc)
In: ***CLINICAL PATHOLOGY***

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1998

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بسم الله الرحمن الرحيم

فَأَمَّا الزَّبَدُ فَيَذْهَبُ جُفَاءً وَأَمَّا مَا

يَنفَعُ النَّاسَ فَيَمْكُثُ فِي الأَرْضِ

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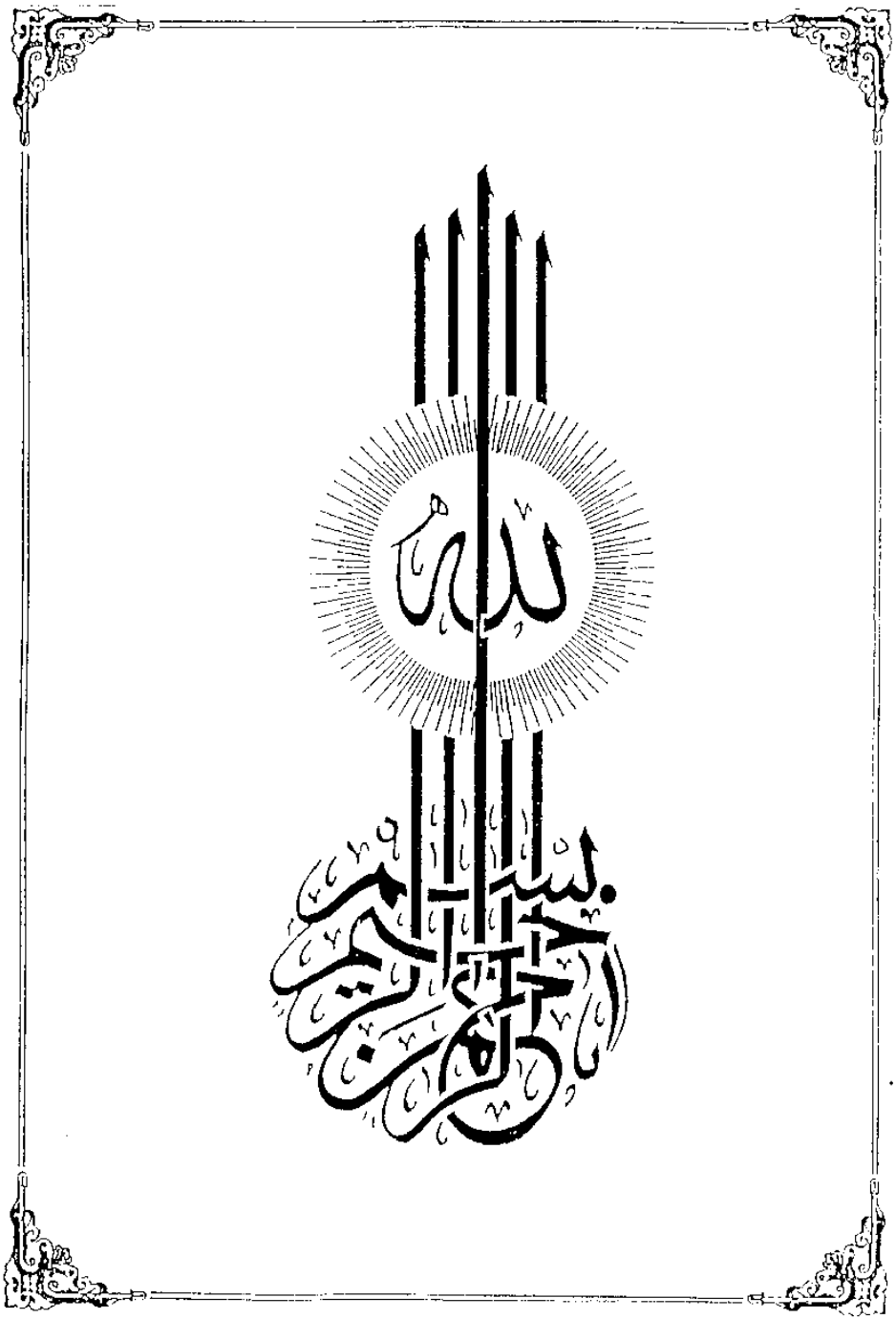

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ACKNOWLEDGEMENT

Starting I would like to thank **GOD** who granted me the knowledge, power and personnel who enabled me to accomplish this work.

I would like to express my deepest gratitude to ***Prof. Dr. Hanzada Ibrahim Abd El Fattah***, Professor of Clinical Pathology, Ain Shams Faculty of Medicine, for her valuable advice, supervision and kind support.

I would also like to express my appreciation to ***Prof. Dr. Dalia Helmy Farag***, Assistant Professor of Clinical Pathology, Ain Shams Faculty of Medicine, for her supervision, advice and co-operation throughout this work.

I would like to sincerely thank ***Dr. Mona Mohamed Zaki***, Lecturer of Clinical Pathology, Ain Shams Faculty of Medicine, for her meticulous supervision, valuable advice and understanding.

I would also like to thank each and every member of the **Clinical Pathology Department**, Ain Shams University for their co-operation.

I would like to thank **my family** for their support and **my husband** without whom I would have never accomplished this work.

Last but no least, I would like to thank every one who gave me a hand in this work.

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LIST OF ABBREVIATIONS

AA	Amino acid
AB	Antibody
ACA	Anti-cardiolipin antibody
AG	Antigen
AGEs	Advanced glycosylation end products
ANA	Anti-nuclear antibody
ANCA	Anti-neutrophil cytoplasmic antibodies
ANX5	Annexins V
APF	Anti-perinuclear factor
AKA	Anti-keratin antibody
ARA	American Rheumatism Association
α1 AT	α1 Anti-trypsin
C-ANCA	Cytoplasm pattern of antineutrophil cytoplasmic antibody
CIC	Circuclating immune complexes
CRP	C-reactive protein
DEAE	Diethylaminoethyl
DNA	Deoxyribonucleic acid
EBV	Epstien Barr virus
ECM	Extracellular matrix components
ELISA	Enzyme linked immunosorbant assay
FITC	Fluorescein isothiocyanate
HIV	Human immunodeficiency virus
HLA	Human leucocytic antigen
HPLC	High performance liquid chromatography
HSP	Heat shock protein
Ig	Immunoglubulin
IgA	Immunoglubulin A
IgG	Immunoglubulin G
IgM	Immunoglubulin M

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LDH	Lactate dehydrogenase
LFT	Latex fixation test
MHC	Major histocompatibility complex
MMPs	Matrix metalloproteinases
MPO	Myeloperoxidase
MTP	Metatarsophalyngeal joint
P-ANCA	Perinuclear pattern of antineutrophil cytoplasmic antibody
PBS	Phosphate buffered saline
PH	Passive hemagglutination
PMN	Polymorphonuclear cells
PR3	Proteinase 3
PV	Plasma viscosity
RA	Rheumatoid arthritis
RANA	Rheumatoid arthritis associated nuclear antigen
RAP	Rheumatoid arthritis
RIA	Radioimmunoassay
RF	Rheumatoid factor
RNA	Ribonucleic acid
ROS	Reactive oxygen species
SDS-PAGE	Sodium dodecylsulphate polyacrylamide gel electrophoresis
SF	Synovial fluid
TCR	T-cell receptor
TIMP	Tissue inhibitor of metalloproteinases
TNFα	Tumour necrosis factor α

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INTRODUCTION AND AIM OF THE WORK

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INTRODUCTION AND AIM OF THE WORK

INTRODUCTION

Rheumatoid arthritis (RA) is a systemic inflammatory disease of connective tissue in which the striking clinical manifestation is its tendency to produce lesions in joints and peri-articular structures *[Buchanan and Kean, 1986]*.

It is not clear whether RA is one disease with multiple etiologies or a symptom complex produced by a single causative factor *[Sack and Fye, 1997]*. Under any condition early diagnosis comes to be very important as joint complications happen to be irreversible in RA where there is ultimately erosion of the underlying bone, ligament destruction and sublaxation of joints *[Maddison, 1990]*.

Although laboratory findings in RA are those of a chronic inflammatory disease i.e. no specific laboratory test exists for this condition, yet a constellation of laboratory findings can aid the experienced clinician in arriving at a diagnosis and in the management *[Baum and Ziff, 1985]*.

Established methods in diagnosis of RA are mainly serological, yet, serology cannot be completely relied upon for many reasons. Seventy percent only of patients with clinical RA are seropositive for rheumatoid factor (RF) *[Wollheim, 1993]*, whereas it

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is found in sera of patients with many acute and chronic inflammatory diseases as well as normal subjects. In addition, many of the seropositive patients upon repeated testing seroconvert and thus RF was found to be a poor guide to the severity of joint disease and the success of treatment *[Akil and Amos, 1995]*.

For all these reasons, recent laboratory tests for diagnosis of RA such as matrix metalloproteinases (MMPs), anti-perinuclear factor (APF), anti-keratin anti-body (AKA) and others have been introduced in order to support the established methods in arriving at a diagnosis as early as possible so as to minimize the morbidity of the disease *[Aho et al., 1991, Zafarullah et al., 1993 and Williams, 1998]*.

AIM OF THE WORK

The aim of this work is to review established laboratory tests for diagnosis of RA as well as to discuss the recent laboratory tests and their value in diagnosis of this clinical condition.

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REVIEW OF LITERATURE

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