OCULAR COMPLICATIONS OF RHEUMATIC DISEASES IN CHILDREN

THESIS

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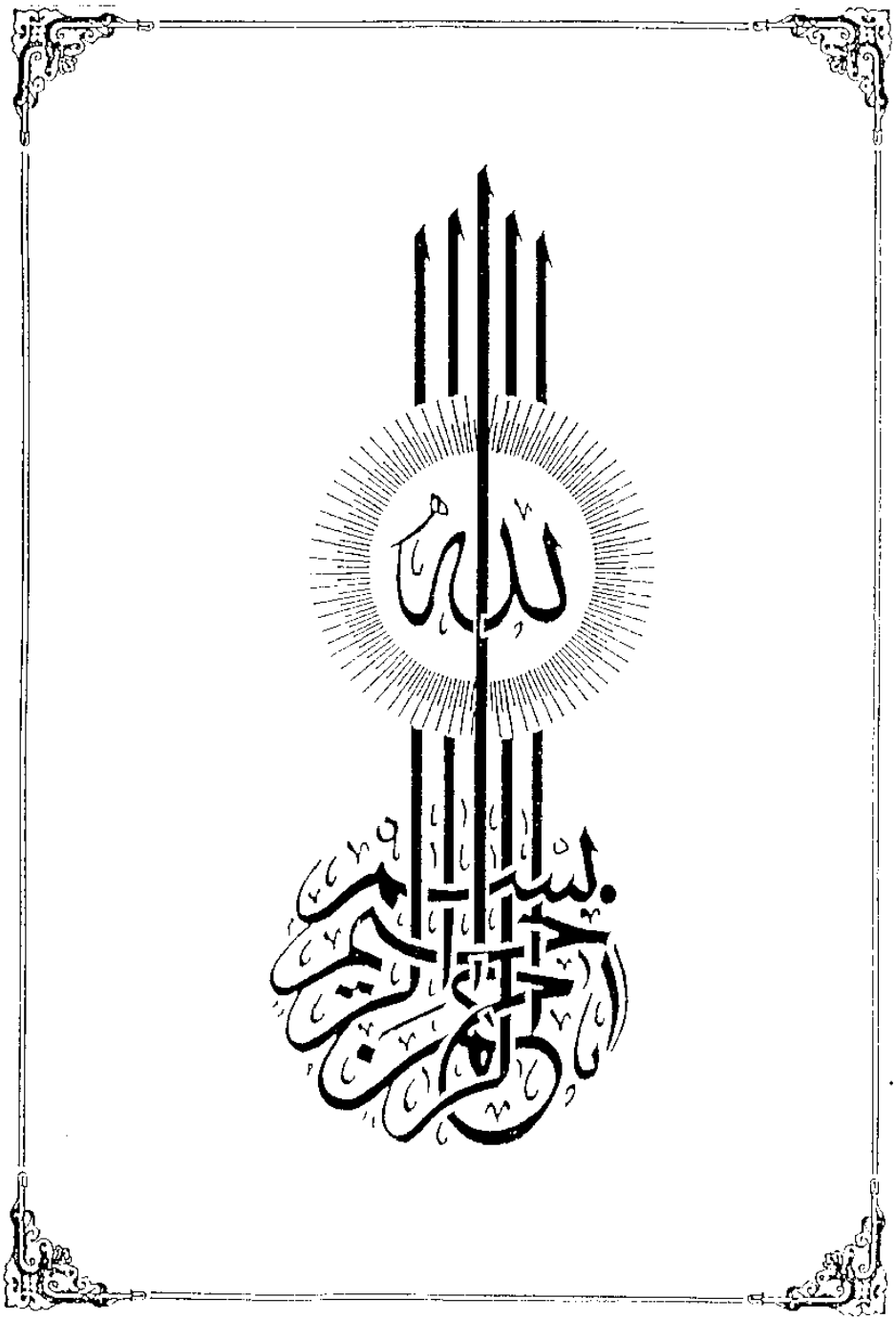
بسم الله الرحمن الرحيم

« قالوا سبحانك لا علم لنا إلا ما
علمتنا إنك أنت العليم الحكيم »

صدق الله العظيم

(سورة البقرة آية ٣٢)



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ABBREVIATIONS

ANA	Anti-nuclear antibody
ASA	Acetyl salicylic acid
BUT	Break up time
C_3	Complement 3
C_4	Complement 4
CRP	C-reactive protein
Cs	Corticosteroids
DNA	Deoxyribonucleic acid
ds-DNA	Double stranded DNA
ESR	Erythrocyte sedimentation rate
HLA	Human leucocyte antigen
HSP	Henoch-Schönlein purpura
IL	Interleukin
JDM	Juvenile dermatomyositis
JRA	Juvenile rheumatoid arthritis
KPs	Keratic precipitates
LPs	Lenticular precipitates
LT	Left
MCTD	Mixed connective tissue disease
NSAID	Non-steroidal anti-inflammatory drugs
RF	Rheumatoid factor
RNP	Ribonucleoprotein
Rt	Right
SLE	Systemic lupus erythematosus
Sm	Smith antigen
VDRL	Venereal Disease Research Laboratory

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Introduction and Aim of the Work

INTRODUCTION AND AIM OF THE WORK

The association between inflammatory ocular and articular disease is a strong one, although the pathogenesis of this relationship is obscure. For the physician or surgeon caring for children with chronic arthritis, awareness of the risk of chronic asymptomatic anterior uveitis is essential if early diagnosis, treatment and prevention of visual impairment are to be accomplished (*Petty*, 1990).

Literature is full of examples of ocular lesions in each of the known rheumatic disorders. Besides, the development and advent of new methods and equipment in ophthalmology made the early diagnosis and follow up of eye diseases available.

This study is aimed to outline the ocular manifestations and complications of some rheumatic diseases in children in relation to disease activity and medication effects.

Review of Literature

RHEUMATIC DISEASES OF CHILDHOOD

These diseases are a group of diverse afflictions that have as their common denominator, inflammation of the connective tissues. The cardinal features of inflammation are redness, swelling, heat, pain and loss of functions (*Cassidy and Petty*, 1990).

Classification of the Rheumatic Diseases in Children

Classification of rheumatic diseases by either clinical or laboratory criteria is complicated by the fact that some rheumatic syndromes appear to be "overlaps" between two or more distinct disease entities (*Cassidy and Petty*, 1990).

Certain criteria were developed specifically for the classification of rheumatic diseases in childhood by a Committee of the American Rheumatism Association that involves other causes of juvenile arthritis which may mimic rheumatic diseases (Table 1) (*Cassidy and Petty*, 1990).

These criteria differ with the specific type of rheumatologic disorder. For rheumatoid arthritis, the criteria are displayed in Table (2).

Table (1): Diagnostic Classification of Juvenile Arthritis and Pediatric Rheumatic Diseases.

- Connective-tissue diseases
  - Juvenile rheumatoid arthritis
  - Systemic lupus erythematosus
  - Scleroderma
  - Dermatomyositis
  - Necrotizing vasculitis
    - Polyarteritis (includes Kawasaki disease)
    - Hypersensitivity vasculitis (includes Henoch-Schönlein purpura and serum sickness
    - Wegener granulomatosis
    - Giant cell arteritis
    - Behçet's disease
    - Miscellaneous
      - Mixed connective-tissue disease and overlap syndromes
      - Eosinophilic fascitis
      - Sjögren's syndrome
- Seronegative spondyloarthropathies
  - Juvenile ankylosing spondylitis
  - Inflammatory bowel disease
    - Regional enteritis
    - Ulcerative colitis
  - Psoriatic spondyloarthritis
  - Reiter's syndrome
- Degenerative joint disease
- Arthritis, tenosynovitis, and bursitis associated with infectious agents
  - Direct
    - Bacterial arthritis
      - Gram-positive cocci (staphylococcus and others)
- Rheumatic diseases associated with immunodeficiency
  - Selective IgA deficiency
  - Agammaglobulinemia and hypogammaglobulinemia
  - Complement component deficiencies
- Metabolic and endocrine diseases associated with rheumatic states
  - Crystal-induced arthritis (gout, pseudogout, chondrocalcinosis)
  - Biochemical abnormalities
    - Amyloidosis (includes familial Mediterranean fever)
    - Vitamin C deficiency (scurvy)
    - Specific enzyme deficiency states (including Fabry's disease, Farber's disease, alkaptonuria, Lesch-Nyhan syndrome)
  - Hyperlipidemias (types II, IV)
  - Mucopolysaccharidoses
  - Hemoglobinopathies (sickle cell anemia, thalassemia)
  - Hemophilia
  - Connective-tissue disorders (Ehlers-Danlos syndrome, Marfan's syndrome, pseudoxanthoma elasticum, and others)
  - Endocrine disease
    - Diabetes mellitus
    - Acromegaly
    - Hyperparathyroidism
    - Thyroid disease (hyperthyroidism, hypothyroidism)
  - Other hereditary or congenital disorders
    - Arthrogryposis multiplex congenita
    - Hypermobility syndromes
    - Myositis ossificans progressiva
- Neoplasms
  - Malignant
    - Primary (e.g. synovioma, synoviosarcoma)