بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

MONA MAGHRABY

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Entheseal Involvement in Patients with Rheumatoid Arthritis

Thesis

For Partial Fulfillment of
M.D. Degree in Internal Medicine

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2021

بِسْمِ اللّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا

سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم

سورة البقرة الآية: ٣٢

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List of Abbreviations

Abb.	Full term
ACPA	Anti-citrullinated protein-antibodies
ACR	American college of Rheumatology
Anti-CCP	Anti-cyclic citrullinated peptide antibodies
APCs	Antigen presenting cells
CDAI	Clinical Disease Activity Index
CRP	C-Reactive Protein
csDMARDs	Conventional synthetic chemical compounds.
DAS	Disease Activity Score
DISH	Diffuse idiopathic skeletal hyperostosis
DMARDs	Disease-modifying antirheumatic drugs
EAM	Extra-articular manifestations
ELISA	Enzyme-linked immunosorbent assay
ERA	Enthesitis related arthritis
ESR	Erythrocyte Sedimentation Rate
EULAR	European League Against Rheumatism
GUESS	Glasgow Ultrasound Enthesitis Scoring System
HAQ	Health Assessment Questionnaire
HAQ-DI	Health Assessment Questionnaire Disability Index
HLA	Human Leukocyte Antigen
HRT	Hormone replacement therapy
IC	Immune complex
ICAM-1	Intercellular adhesion molecule-1
ICs	Immmunocomplexes
IL	Interleukin
ILD	Interstitial Lung Disease
IV	Intravenous
JAK	Janus kinase

List of Abbreviations *(Cont...)*

Abb.	Full term
JAS	Juvenile ankylosing spondylitis
MASEI	Madrid Sonogarhic Enthesitis Index
MCP	Metacarpophalangeal
MMPs	Matrix metallo-proteases
MRI	Magnetic resonance imaging
MTX	Methotrexate
No	Number
NSAIDs	Non-steroidal anti-inflammatory drugs
OPG	Osteoprotegerin
PAD 4	Peptidyl arginine deiminase, type IV.
PAF	Platelet activating factor
PD	Power Doppler
PIP	Proximal interphalangeal
PNGD	Palisaded neutrophilic granulomatous dermatitis
PSA	Psoriatic Arthritis
PTPN22	Protein tyrosine phosphatase non-receptor type 22
RA	Rheumatoid arthritis
RANKL	Receptor activator of nuclear factor kB ligand
RF	Rheumatoid factor
RND	Rheumatoid neutrophilic dermatosis
SAPHO	Synovitis, acne, pustulosis, hyperostosis, osteitis (SAPHO) syndrome
SC	Subcutaneous
SDAI	Simplified Disease Activity Index
SDAI	Simplified Disease Activity Index
sDMARDs	Synthetic chemical compounds

List of Abbreviations *(Cont...)*

Abb.	Full term
SE	Shared-epitope
SJC	Swollen joints count
SPA	Spondyloarthropathy
SPSS	Statistical package for social science
sSS	Secondary Sjögren's syndrome
STAT	Signal Transducer and Activator of Transcription
Th	T-helper cell
TJC	Tender joints count
TNF	Tumor necrosis factor
TNFAIP	Tumor Necrosis Factor, Alpha-Induced Protein
TRAF	TNF receptor-associated factor
ULN	upper limit of normal
US	Ultrasonography
VAS	Visual analogue scale

INTRODUCTION

Rheumatoid arthritis (RA) is an autoimmune disease characterized by chronic inflammation of synovial tissue that leads to damage of cartilage and bone, resulting in irreversible joint destruction (*Smigielska-Czepiel et al., 2014*).

RA is also characterized by abnormal proliferation of synoviocytes, leukocyte infiltration, and angiogenesis (*Park et al., 2014*). Epidemiological studies show that RA affects 1% of the population worldwide (*Rojas-Villarraga et al., 2009*).

RA is typically a distal, symmetrical, small joint polyarthritis, most commonly involving the metacarpophalangeal (MCP) and proximal interphalangeal joints of the fingers (PIJ), interphalangeal joints of the thumbs, the wrists, and metatarsophalangeal joints of the toes (MTP). Other joints of the upper and lower limbs, such as the elbows, shoulders, ankles, and knees are also commonly affected. The involvement of tempro-mandibular and sterno-clavicular joint and cervical spine is relatively uncommon *(Smolen et al., 2016).*

Musculoskeletal manifestations include tenosynovitis (defined as inflammation of the tendon and its enveloping tendon sheath) and carpal tunnel syndrome *(Maini, 2003).*