بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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بالرسالة صفحات

لم ترد بالأصل

Clinical utility of anti-CCP assay in patients with rheumatoid arthritis

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List of abbreviations

ACR	American College of Rheumatology
AFA	antifilaggrin autoantibodies
AKA	Antikeratin antibody
Anti-CCP	Anticyclic citrullinated peptide
APF	Antiperinuclear factor
ATTRACT	Anti- tumor necrosis factor trial in rheumatoid arthritis with concomitant therapy
BAL	Bronchoalveolar lavage
C:MC	Carpo:metacarpal ratio
CAM	Complementary and alternative medicine
CD	Cluster of differentiation
CMC	Carpometacarpal
Cox	Cyclooxygenase enzyme
CRP	C- reative parotein
CTS	Carpal tunnel syndrome
DAS28	The 28 joint disease activity score
DIP	Distal interphalangeal joint
DM	Dermatomyositis
DMARDs	Disease-modifying antirheumatic drugs
EBV	Epstein–Barr virus
ELISA	Enzyme linked immunosorbent assay
ESR	Erythrocyte sedimentation rate
Fc	Fragment crystallizable
FM	Fibromyalgia
HAQ	Health Assessment Questionnaire
HAQ-DI	Health Assessment Questionnaire – disability index
HCQ	Hydroxychloroquine
HCV	Hepatitis C virus
HEVs	High endothelial venules
HLA	Human leucocytic antigen
HRCT	High resolution CT scan

Ig	Immunoglobulin
IL	Interleukin
ILD	Interstitial lung disease
IP	Interphalangeal
JSN	Joint space narrowing
MCB	Metacarpal base
MCP	Metacarpophalangeal joint
MCTD	Mixed connective tissue disease
MHC	Major histocompatibility complex
mRNA	messenger ribonucleic acid
MTP	Metatarsophalangeal joint
MTX	Methotrexate
NSAIDs	Non-steroidal anti-inflammatory drugs
OA	Osteoarthritis
PAD	Peptidylarginine deiminase
PIP	Proximal interphalangeal joint
PM	Polymyositis
PMR	Polymyalgia rheumatica
PsA	Psoriatic arthritis
PTB	Patellar tendon-bearing orthosis
RA	Rheumatoid arthritis
RF	Rheumatoid factor
ROM	Range of motion
RT-PCR	Reverse transcriptase-polymerase chain reaction
SENS	Simple Erosion Narrowing Score
SES	Short Erosion Scale
SLE	Systemic lupus erythematosus
SSc	Systemic sclerosis
SSZ	Sulfasalazine
Tc^{99m}–DTPA	Technetium^{99m} diethylene triamine pentacetate radionuclide
TNF	Tumor necrosis factor

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INTRODUCTION
AND
AIM OF THE WORK

Introduction

Rheumatoid arthritis is a systemic autoimmune disease of unknown origin. The diagnosis of RA remains empirical and imprecise, particularly early in the course of diease. Because early initiation of disease modifying treatments can significantly improve long-term outcomes for patients with RA, there is considerable motivation to accurately diagnose RA in patients with inflammatory arthritis early in the course of disease *(O'Dell, 2002; Mottonen et al., 2002).*

The presence of rheumatoid factor (RF) was identified in patients with RA over 50 years ago *(Rose et al., 1949),* assays for RF remain one of the American College of Rheumatology (ACR) classificition criteria for RA *(Arnett et al., 1988).* The RF assay, in its current manifestation, remains suboptimal as a diagnostic test, as it lacks sensitivity (54-88%) and specificity (48-92%) *(Weinblatt et al., 1980; Schellekens et al., 2000).*

Anti-cyclic citrullinated peptide (anti-CCP) antibody belongs to the family of antifilaggrin autoantibodies (AFA), accompanied by the antikeratin anti body (AKA) and antiperinuclear factor (APF) *(Sebbag et al., 1995).* The epitopes recognized by AFA, AKA, and APF were found to be generated by a post-translational modification, namely deimination of the natural amino acid arginine to the amino acid citrulline by activity of peptidylarginine deiminase. Based on that knowledge, *Schellekens et al.(1998)* developed an enzyme linked immunosorbent assay (ELISA) using a cyclic citrulinated peptide (CCP) derived from the sequence of human filaggrin as substrate *(van Venrooji et al., 2002; Zendman et al., 2004).* The second version of the anti-CCP test (anti-CCP2) demonstrated high specificity (89-98%) and good sensitivity (41-88%) for RA *(Herold et al., 2005).*

Initial studies characterising the frequency of antibodies to CCP in mixed cohorts containing patients with rheumatic diseases, infectious diseases, and healthy subjects, have shown it to be moderately sensitive (68%) but highly specific (98%) for RA *(Schellekens et al., 2000)*. Anti-CCP gives us a tool, which is important to identify patients with early RA *(Gao et al., 2005)*, and helps to diagnose other inflammatory and non-inflammatory diseases (especially connective tissue diseases) by reducing the rate of false-positive results in comparison with RF *(Sauerland et al., 2005)*. Anti-CCP is also significantly associated with some parameters of both disease activity and severity *(Samanci et al., 2005)*.

Aim of the work:

This work aims to evaluate the clinical utility of the newer version of anti-CCP (anti-CCP2) in patients with RA relative to patients with a diversity of rheumatic diseases. We intend to study the relationship between anti-CCP and disease activity parameters, functional disability, and radiological destruction in rheumatoid arthritis patients, as well as to examine the sensitivity and specificity of anti-CCP in those patients.