

## THE INVESTIGATING OF HEAT SHOCK PROTEINS 70 (HSP70) IN SERA OF RHEUMATOID ARTHRITIS PATIENTS IN THI-QAR PROVINCE

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### ABSTRACT

Heat shock protein or HSPs are being synthesized under different kind of stress conditions and act as molecular chaperones for protein molecules. because these protein were first found in cell that were exposed to high temperature, they are called "heat shock protein " Several risk factors are involved in the pathogenesis of autoimmune rheumatic diseases, including genetic factors, smocking, chronic infections, sex hormones and stress.

Stress is now recognized as an important risk factor in the pathogenesis of rheumatoid arthritis by considering that the activation the stress response of immune system. In this study that were investigating about role of heat shock protein 70 in pathogenesis and immune response in RA. The sample of the study includes 145 patients with RA. They were achieved four or more of the criteria of the 2010 American College of Rheumatology, the sample of control in the study include 60 person apparently healthy volunteers were included in this study.

This study shown high statistically significant ( $P < 0.00$ ). Between studied group and control when we measured concentration of HSP70 on Samples, and shown slightly statistically significant between studied groups ( $P < 0.05$ ) according the gender. and this study shown high significant difference between subgroup of patients such as smokers, non-smokers, stressful, non-stressful, low economic status ... e.t.c.

### Conclusions

Some of environmental factors such as smoking, stressful, others chronic infections, duration of disease, age and sex reactive with genetic factors to play main role in the determination this immunological marker in patients with RA.

**KEYWORDS:** Rheumatoid Arthritis, Heat Shock Protein 70, Smoking, Stress, Immune Response