

INTRODUCTION AND AIM OF THE WORK

Introduction :

Interleukin-6 (IL-6) is a multifunctional cytokine that is produced by a range of cells and plays a central role in the host defence mechanism (*Hirano and Kishimoto, 1990*) It is a pleotropic cytokine which plays an important role in the induction of immune and inflammatory response. In particular, IL-6 induces fever, acute phase protein synthesis, leukocytosis and thrombocytosis (*Van Snick , 1990*) . Many types of cells have been shown to produce IL-6 , including synovial cells and chondrocytes (*Guerne et al., 1990*) . Elevated levels of IL-6 have been found in sera and synovial fluids of adult patients with rheumatoid arthritis (*Guerne et al., 1989*).

IL- 6 is a central mediator of the host's defensive response to inflammation. Its diverse actions include the induction of hepatic acute phase protein, stimulation of plasma cells to secrete immunoglobulins. It is also an important growth and maturation factor for haematopoietic progenitor cells including megakaryocytes (*Ishibashi et al. 1989*).

Rheumatoid arthritis (RA) is a systemic disease with inflammation of synovial joints as its cardinal manifestation (*Buchanan and Kean, 1986*). Disease activity in RA is frequently associated with a marked acute phase response as manifest by raised erythrocyte sedimentation rate (ESR), elevation of C-reactive protein (CRP), anaemia and thrombocytosis. Evidence of immune hyperactivity is proved by the hypergamma-globulinaemia and the presence of rheumatoid factor (RF) in the blood and synovial fluid (*De Benedetti et al., 1991*) .

Levels of IL-6 is correlated strongly with the ESR, RF titers and platelet counts. It may be responsible for the systemic manifestations of RA and its measurement in the serum may be of value for the assessment of disease activity in this very common disease.

B₂-M is a low molecular weight protein (11.800) , synthesized by nucleated cells and present as part of histocompatibility antigens on the cell surface (*Berggard and Bearn, 1968*). These are rapidly turned over and shed into body fluids. Since lymphocytes are one of the rapidly turning over nucleated cells the suggestion has been made that B₂-M levels in serum reflect lymphocyte activation and therefore would be of direct relevance to the underlying disease process (*Panayi, 1982*).

Aim of the work :

The aim of this work is to measure serum level of IL-6 and B₂-M in patients with RA, and to clarify the possible relations to disease activity, disease duration, presence or absence of R.F., presence or absence of antinuclear antibody (ANA) and type of drug therapy.