INTRODUCTION AND AIM OF THE WORK

Rheumatoid arthritis (R.A.) is a chronic, symmetrical inflammatory polyarthritis of unknown cause involving the diarthrodial joints and exhibiting in a proportion of patients, a variety of extra-articular features (Panayi and David, 1983).

Juxta- articular and generalized osteoporosis is a common feature of rheumatoid arthritis and is related mainly to the duration of the disease, age, sex and the use of corticosteroids (Muller and Jrist, 1974).

It has not been established whether rheumatoid arthritis associated osteopenia, if uninfluenced by glucocorticoids, is determined by the degree of functional impairment or by the duration of the disease, nor is it known weather the bone loss and the biochemical disturbances of calcium metabolism are proportional to these clinical variables (Mueller, 1976).

Some studies have shown that corticosteroid have a significant role in osteoporosis in rheumatoid arthritis (Reid et al., 1982) while others have failed to confirm an increased incidence of osteoporosis (D'Angelo et al., 1985).

Several studies have suggested that low dose corticosteroids may be relatively safe in rheumatoid arthritis with regard to the risk of developing osteoporosis. (Hajiroussou and Webley, 1984).

The assessment of bone metabolism and bone disease remains a difficult problem in clinical medicine. The measurements of alkaline phosphatase in blood and calcium excretion in urine have been the most widely and biochemical tests for this purpose. Serum alkaline phosphatase is a marker of bone formation and fasting urinary calcium is marker of bone resorption (Nordin, 1978).

Because alkaline phosphatase in the blood contributes to bone, liver, gastrointestinal tract, placenta and certain tumors, in this study we determined the alkaline phosphatase isoenzymes (bone fraction) to be accurate as a marker for bone formation and we determined fasting urinary calcium :creatinine ratio as a marker for bone resorption. Determination of these biochemical variables enable non- traumatic evaluation of bone turnover in a large group of patients.

Aim of the work :

Accordingly, this work done to evaluate bone turnover in rheumatoid arthritis patients and to assess degree of bone turnover and to find out if there is correlation between bone turnover and disease activity, corticosteroid treatment, disease duration.