Literature supports the state of classifying patients into two subsets of the disease, seropositive and seronegative rheumatoid arthritis (RA). This is the object of many studies, which target the clarification of this phenomenon, without any definitive or acceptable answer so far. Diagnostic radiology plays a crucial role in finding distinctive characteristics related to a particular RA group.

Objective was to investigate differences between seropositive and seronegative RA, regarding radiographic damages in patients with RA.

We included 250 patients from the cohort with rheumatoid arthritis satisfying ACR classification criteria (1987). The studied group consisted of 93 female, 32 male “seronegative”, with titers lower then 1/64 defined by Rose-Waaler test, while the control group consisted of 93 female, 32 male “seropositive” with titers of 1/64 or higher. All examinees were between 25-60 years of age (Xb=49.96, SD=10.37) with disease duration between 1-27 years (Xbox=6.41, SD=6.47). All patients underwent a standardized evaluation radiographs. Baseline standardized poster anterior radiographs of the hands and feet and radiographs of the other joint, depending of indications, were assessed.

Anatomic changes of 2nd and 3rd level were nearly equally distributed in both subsets [76(60.8%) seronegative, 75(60%) seropositive]. Longer duration of the disease resulted in increase of radiological changes in both subsets [(r=0.66, p<0.01) seronegative, (r=0.49, p<0.01) seropositive]. ERS values correlated with radiological damages, statistical difference was found for seronegative subset (r=0.24, p<0.01).

Radiological damages are nearly equal in both subsets, elevate in relation to the duration of the disease and correlate with ERS, equally with regard to serostatus. Regarding to sero-status, differences within sex, with some exceptions, are not relevant.

Keywords: rheumatoid arthritis, seropositive, seronegative, radiography estimation.