

Rheumatoid Arthritis and Osteoporosis

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Abstract: The base of rheumatoid arthritis is joint destruction, while there can also be numerous extraarticular manifestations. RA represents a risk factor for osteoporosis especially in the early phase of RA and it is connected with the intensity of inflammation. The goal of this study was to investigate the relation between radiograph progressions and loss of bone mineral density in patients with RA. Methods: The study included 62 patients diagnosed with RA without any risk factors influencing bone metabolism. Based on standard radiography of hands and feet, the level of radiograph progression was defined for all patients (Larsen's score), and they all had their bone mineral density measured by LUNAR DPX 2000 DXA. Results: average age of patients was 57, the average disease duration was seven years. Average Larsen's score was 105, and bone mineral density expressed as T score was L1-4 $-1,07 \pm 1,31$ SD on the lumbar spine and on the hip T score was $-0,83 \pm 1,22$ SD. We showed that the values of Larsen's score negative correlate with the bone mineral density expressed as T score on both localities L1-4 ($R=0,304$; $p=0,016$) and hip ($R=-0,292$; $p=0,022$). Average duration of the disease correlated with Larsen's score but not with bone mineral density. Conclusion: Results of this study pointed to systemic loss of bone mineral density in patients with RA, and its correlation with the level of joint damages valued by Larsen's score. Therefore, in case of patients with RA, it is also important to additionally measure and monitor changes in bone mineral density besides radiographic monitoring the progression of the disease.

Keywords: radiological progression, bone mineral density, rheumatoid arthritis