

BONE MINERAL DENSITY IN FEMALE PATIENTS WITH SYSTEMIC SCLEROSIS AND DIFFERENT SEROLOGICAL STATUS OF DISEASE

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There are controversial opinions whether bone mineral density (BMD) is lower in patients with systemic sclerosis (SSc) than in age-matched population. The objective is to determine bone mineral density (BMD) in postmenopausal SSc patients, to investigate possible relationship between BMD and antibody status and to determine the association of dose and duration of glucocorticoid (GC) therapy and BMD in patients with SSc. Fifty-nine postmenopausal patients with SSc and 35 age - matched healthy controls were examined. BMD was measured at the lumbar spine (L1-L4) and proximal femur by DXA densitometer-Hologic at the Institute for Rheumatology "Niška Banja". The serological tests recorded the presence of patients' antinuclear antibodies (ANA), anticentromere antibodies (ACA) and antitopoisomerase antibodies (ATA). Valentini's disease activity score was identified in all the patients with SSc. We found significantly lower average BMD and T score in postmenopausal SSc patients compared to the control groups (lumbar spine: $p < 0.0001$; femoral neck, $p < 0.0001$). No difference was found in BMD and T score in SSc patients with ACA versus ATA. Increasing age correlated with significantly lower BMD ($r = -0.714$, $p = 0.001$) and T score ($r = -0.705$, $p = 0.001$) at femoral neck. There was a negative correlation between disease duration and lower BMD ($r = -0.467$, $p = 0.038$) and T score ($r = -0.455$, $p = 0.04$) at the femoral neck. Scleroderma patients have significantly lower BMD at the hip and lumbar spine than healthy control subjects. No statistical difference in BMD was found between ACA and ATA in SSc patients. Aging and longer duration of the disease are associated with a greater loss of bone on the hip, while the long-term use of GC is associated with a decrease in BMD on the spine. There was no significant difference in the correlation between disease activity and bone density in examined patients with SSc.

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