

البحث السابع

Title: Vitamin D status in ankylosing spondylitis patients: Relation to bone health, disease activity, functional status, spine mobility and enthesitis

Summary:

Ankylosing spondylitis is an inflammatory disorder of unknown cause that features arthritis of spines, sacroiliac joint, peripheral joints, and enthesitis. Osteoporosis is a well-recognized early complication of this disease. Many studies have suggested that alterations in the serum levels of vitamin D are associated with AS-related inflammatory activity. Given that this disease affects patients in their productive period in life, and osteoporosis is one of the comorbidities of the disease, so we aimed to screen a cohort of Egyptian patients with AS from three different Rheumatology centers, for their serum levels of vitamin D in relation to bone mineral density, bone metabolism, and disease activity. Sixty patients with Ankylosing Spondylitis along with the same number of controls were included. Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), Bath Ankylosing Spondylitis Metrology Index (BASMI), Ankylosing Spondylitis Disease Activity Score (ASDAS), and Maastricht Ankylosing Spondylitis Enthesitis Score (MASES) were done to all patients. In addition, serum levels of C reactive protein (CRP), vitamin D3, carboxy-terminal telopeptide of type I collagen (CTX-1), alkaline phosphatase (ALP), bone alkaline phosphatase (BAP) and plasma erythrocyte sedimentation rate (ESR) were measured. Also, patients were subjected to radiological examinations in the form of dual-energy X-ray absorptiometry (DXA) besides plain X-ray of the sacroiliac, cervical, dorsal, and lumbar spine joints. Our data showed that patients with AS had significantly lower levels of vitamin D and higher levels of CTX-1, ALP and BAP in comparison to healthy controls. Low serum levels of vitamin D were significantly correlated with low BMD scores, high levels of bone turnover markers and with high disease activity. As well, vitamin D deficiency was associated with peripheral joints affection. Thus, this study showed that vitamin D may play a role in the pathogenesis and progression of AS in Egyptian patients which should be more comprehensively investigated in the future