Int J Rheum Dis. 2009 Jul;12(2):130-5.

Reduced bone density in patients on long-term warfarin.

Rezaieyazdi Z, Falsoleiman H, Khajehdaluee M, Saghafi M, Mokhtari-Amirmajdi E.

Department of Rheumatology, Mashhad University of Medical Sciences, Mashhad, Iran. rezaieyazdi-z@mums.ac.ir

Abstract

AIM: Vitamin K is an essential factor for carboxylation of bone matrix protein. Low vitamin K may be associated with reduced bone mineral density (BMD). The issue of whether long-term sodium warfarin therapy as oral anticoagulant that antagonizes vitamin K, results in decreased bone density, is controversial. Our purpose in this study was to assess the effects of warfarin on BMD. METHODS: We performed a case control study survey of bone density in 70 patients with rheumatic valvular heart disease 'mechanical valve replacement' on long-term warfarin compared with 103 randomly selected matched controls. RESULTS: There was a marked reduction in BMD (g/cm(2)) and T-score of lumbar spine between patients and controls ($P = 0.048, 0.005$). Duration of warfarin use was the only risk factor of significant importance respectively on spinal T-score ($P < 0.03$). CONCLUSIONS: Screening of patients on long-term warfarin for reduced bone density should be considered. We strongly suggest the prophylactic use of calcium-vitamin D supplements for these patients.

PMID: 20374330 [PubMed - in process]