

## Association of Serum Uric Acid Level and Bone Mineral Density of Menopausal Women

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**Abstract :** Objective: This retrospective study investigated the association between uric acid level and bone mineral density (BMD) in the postmenopausal period. Methods: The study included 328 menopausal women (mean age,  $57.3 \pm 6.5$  years; mean serum uric acid level,  $4.6 \pm 1.0$  mg/dL). Patients were divided into three groups by tertile of serum uric acid level. Patients who used hormone treatment (HT), bisphosphonates, or lipid-lowering agents were included. Results: Blood urea nitrogen, serum creatinine, and serum triglyceride levels were significantly higher in the upper uric acid tertiles. No significant difference was found in the mean uric acid levels between medication users and non-users. Distinct HT regimens showed different mean serum uric acid levels. In a cross-sectional analysis, higher serum uric acid levels showed a tendency toward increased BMD in the spine and femoral neck. Longitudinal analysis of 186 women who underwent follow-up examination at a mean interval of 14.6 months revealed a trend toward a smaller reduction in femoral neck BMD in women in the upper serum uric acid tertiles. Conclusion: A positive correlation exists between serum uric acid levels and BMD in menopausal women.

**Keywords :** menopause, antioxidant, uric acid, bone mineral density

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