

Record: 1

Title: Bone mineral density in premenopausal women receiving levothyroxine suppressive therapy.

Authors: Nuzzo V; Department of Molecular and Clinical Endocrinology and Oncology, University Federico II, Naples, Italy.

Lupoli G

Esposito Del Puente A

Rampone E

Carpinelli A

Del Puente AE

Oriente P

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Abstract: Osteoporosis is a well-known complication of thyrotoxicosis. Prolonged subclinical hyperthyroidism due to L-thyroxine treatment has been associated with reduced bone mass and thus with the potential risk of premature development of osteoporosis. The aim of this study was to assess the effect of a chronic L-thyroxine suppressive treatment on bone mineral density (BMD) in a group of premenopausal women. Forty

consecutive patients (mean age \pm SE = 40.95 \pm 1.56 years) affected by non-toxic goiter underwent bone mineral densitometry (dual energy X-ray absorptiometry; DEXA) of the lumbar spine (L1-L4) and right femoral neck. At the time of the study the patients had been under thyroid stimulating hormone (TSH) suppressive therapy for 74.95 \pm 10.34 months (range 17-168 months). Baseline levels of free thyroxine (fT4), free triiodothyronine (fT3), TSH, calcium and phosphorus were measured and correlated with BMD. The age of starting, duration of treatment, main daily dose, cumulative dose of treatment and body mass index (BMI) were also correlated with BMD. Statistical analysis was performed by multiple linear regression. BMD among female patients was not significantly different from that of the general population matched for age and sex. With the use of the regression model, no significant correlation was found between BMD and the variables considered. In conclusion, our data suggest that L-thyroxine suppressive therapy, if carefully carried out and monitored, has no significant effect on bone mass.

Substance Nomenclature: 06LU7C9H1V (Triiodothyronine)
9002-71-5 (Thyrotropin)
Q51BO43MG4 (Thyroxine)

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