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Titel des Beitrags: [Bone metabolism, bone density and estrogen levels in perimenopause: a prospective 2-year-study]

Abstract: Bone metabolism and trabecular bone density were studied prospectively in 69 pre-, peri- and early postmenopausal women. Markers of bone resorption (OC = osteocalcin, BAP = bonespecific alkalic phosphatase) and bone formation (PYD = pyridinolin, DPD = desoxypyridnolin, NTX = N-terminal telopeptide crosslinked collagen type I, CTX = C-terminal telopeptide crosslinked collagen type I) in serum and urine were followed over a course of two years with five points of examination (0, 3, 6, 12 and 24 months). Bone density was measured at 0 and 24 months. The results of 40 hormonally untreated women who completed all examinations were compared regarding menopausal status and changes over the 2-year-period. While baseline trabecular bone density was lowest in early postmenopausal women, perimenopausal women showed greatest bone loss (-10.6%) during the two year study period. Bone metabolism markers were highest in the postmenopausal group. Perimenopause was associated with a gradual rise in OC, PYD and CTX. Perimenopausal women showed the highest serum estradiol at 0 and 12 months with values exceeding those of premenopausal women. Whether the increased perimenopausal bone loss could be related to the increase in anovulatory cycles during the perimenopausal transition is subject to ongoing investigation.