

Home

Endocr Rev, Vol. 34 (03\_MeetingAbstracts): SAT-235

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## EFFECTS OF TREATMENT FOR ACROMEGALY ON BONE MINERAL DENSITY (BMD): IS PEGVISOMANT PROTECTIVE ON LUMBAR BMD?

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**Background:** GH-IGF-1 status is important for bone health. Acromegaly affects bone status, but less is known on the role of treatments for acromegaly on bone mineral density (BMD). Pegvisomant (Peg) is effective in treating acromegaly by reducing IGF-1. As serum GH is not influenced by Peg, it is not known if residual, direct GH effects on bone (not IGF-1 mediated) are preserved during treatment. **Methods:** To evaluate the effects of Peg on BMD, we compared 5 patients treated with Peg (alone or in combination) to 6 patients treated with Somatostatin Analogues (SA) and to 7 patients surgically cured, not under medical therapy. All the patients had normal serum IGF-1. BMD was measured by DEXA (Hologic-QDR-2000 densitometer, Inc., Waltham, MA). A t-score of  $\leq 1$  and  $\leq 2.5$  at lumbar spine (L1-L4) and at femoral neck was used for diagnosis of osteopenia and osteoporosis, respectively.

**Results:** Mean age of subjects (seven males and nine females) was  $60.7 \pm 9.8$  yrs. At lumbar spine, 40% of Peg-patients, 33.3% of SA-patients, and 60% of not-treated patients had osteopenia; none of the Peg-patients, and 16.7% of SA-patients, and none of not-treated patients were osteoporotic. Considering the femoral neck, 60% of Peg-patients, 33% of SA-patients, and 60% of not-treated patients had osteopenia; 20% of Peg-patients and none of the other two groups were osteoporotic.

**Conclusions:** The percentage of osteoporotic/osteopenic acromegalic patients seems to be lower than that reported in literature. Peg seems to protect bone at lumbar spine, but this protective effect does not seem to be exerted at femoral level where, indeed, patients treated with Peg present lower densitometric values. Patients surgically cured, not under medical therapy, have higher rate of lumbar osteopenia. No data are available on bone quality, a parameter that is usually altered in acromegaly.

Nothing to Disclose: GB, DS, CD, SD, GF, BM, MS, CC, VR

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