

The Argentinian Society of Osteology and Mineral Metabolism (AAOMM) is a national scientific society founded in 1984 dedicated to clinical and basic research into mineralized tissue. AAOMM Meetings are held annually, attracting a wide audience from throughout Argentina, Latin America, and beyond. The program brought together world leaders such as Dr John Bilezikian, Dr Teresita Bellido, Dr Luis del Río, and Dr Isidro Salusky.

The sessions this year were:

*ASBMR 2019 highlights*

*Glucocorticoids: bone and muscle effects*

*Chronic hypoparathyroidism*

*Hyperparathyroidism*

*Bisphosphonates, 50 years of history*

*Sequential treatment for osteoporosis*

*Osteoimmunology*

*Secondary osteoporosis*

*Rare bone diseases*

*Treatments for bone diseases: an update*

*Vertebral fractures*

*Densitometry in pediatrics*

*Regenerative Medicine*

Fifty-eight abstracts were submitted and presented at the meeting, and 27 of them are listed here:

**Preliminary study of assessment of cortical and trabecular bone in patients with Gaucher disease due to 3D reconstruction of the proximal femoral due to DXA**

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**Objective:** Evaluate cortical and trabecular bone in patients with Gaucher disease (GD) treated with imiglucerase and its relationship with bone mass and vertebral fractures. They were compared with it will be evaluated with a control group. **Materials and methods:** an observational descriptive study of 73 patients with EG over 18 years of both sexes treated with imiglucerase were evaluated. BMD on lumbar spine and femoral neck by DXA (Lunar Prodigy Advance) were performed. Dorsal and lumbar spine Rx were used to assess the presence of vertebral fractures. The 3D analysis of the proximal femur was performed with the 3D-Shaper software (Galgo Medical, Spain). The following variables were considered: integral volumetric BMD, trabecular volumetric BMD, cortical BMD (sdens). The data are expressed as mean±SD and the differences were considered significant if  $p < 0.05$ . The Student t-test or the Mann-Whitney test were used. **Results:** 73 patients with GD (34.5±13.3 years and 11.5 years of diagnosis of GD), 56% women. All patients had received imiglucerase (mean dose 52±15 U/kg). The lumbar spine BMD (L1-L4) was 1.151±0.148 g/cm<sup>2</sup> while in the femoral neck it was 1.021±0.18 g/cm<sup>2</sup>. BMD was normal in 80% of subjects while osteopenia or osteoporosis was found in 20% of patients. The 3D hip analysis yielded the following results: cortical sdens = 164.7±27.3 g/cm<sup>2</sup>; trabecular volumetric BMD = 216.6±52.1 g/cm<sup>3</sup>; integral volumetric BMD = 364.5±60.6 g/cm<sup>3</sup>. 13.4% of subjects with vertebral fractures were found. No significant differences were found between fractured and non-fractured, with BMD of the lumbar spine and femoral neck. The analysis of the cortical and trabecular components through 3D reconstruction of the proximal femur also showed no significant differences between patients with and without vertebral fracture. **Conclusion:** In our preliminary study we found no differences in the cortical and trabecular bone of the hip in patients with vertebral fractures and also with BMD. This is the first report of bone structure and size analysis in patients with Gaucher disease.

### **Sequential treatment for idiopathic osteoporosis in premenopausal women. A case report**

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Idiopathic osteoporosis (IOP) affects young, otherwise healthy individuals with intact gonadal function and no secondary cause for bone loss or fragility. IOP may be associated with major osteoporotic fractures such as low-trauma spine or hip. **Aim:** To evaluate the safety and effectiveness of sequential treatment in premenopausal women diagnosed with IOP. **Case presentation:** A 33-year-old premenopausal woman was referred by the Gynecology Department to evaluate bone and mineral metabolism. At 28 years of age, the patient had shown a fracture for bone fragility on her right hip. Attaining menarche at age 9, she had regular menstrual cycles (estradiol: 39.3 pg/ml and follicle-stimulating hormone: 8.4 mIU/l). At the time of consultation, she showed a bone mineral density (BMD, Hologic Discovery Wi) in lumbar spine: 0.720 g/cm<sup>2</sup>; Z-score: -3.2, and in total left femur: 0.536 g/cm<sup>2</sup>; Z-score: -3.3. No osteoporosis-provoking secondary causes were identified; thus, it was interpreted as IOP. She received sequential therapy (ST) with teriparatide (PTH1-34; Forteo, USA) for two years, and then with densomab 60 mg s.c. (Prolia; USA) associated with a calcium dietary supply of 1000 mg/day and vitamin D<sub>3</sub> 100.000IU/bi-monthly. **Results:** A 19% increase in LS BMD (least significant change [LSC]: 2.2%) and 16% in FIT (LSC: 3.0%) were observed. **Conclusion:** The ST was associated with large increase in BMD of LS and FIT in our patient. No adverse effects associated with teriparatide or densomab were observed. Further clinical studies are necessary to determine the safety and effectiveness of ST in those premenopausal women with IOP. Until then, ST should be used with caution.