

VOLUME 28 SUPPLEMENT 1 MARCH 2017

# OSTEOPOROSIS INTERNATIONAL

with other metabolic bone diseases

EDITORS-IN-CHIEF JOHN A. KANIS AND FELICIA COSMAN

WCO-IOF-ESCEO

World Congress on Osteoporosis, Osteoarthritis  
and Musculoskeletal Diseases

23–26 March, 2017

Florence, Italy



and HSA indices were unchanged. Estradiol increased (115 to 198 pmol/L,  $p<0.01$ ), PTH increased (60 to 69 ng/mL,  $p<0.04$ ), calcitriol decreased (198 to 115 pmol/L,  $p<0.01$ ), 25OHD declined (80 vs. 64 nmol/L,  $p<0.01$ ), CTX declined (0.47 to 0.37 ng/mL,  $p<0.04$ ). P1NP, sclerostin, calcium, ionized calcium; intake of vitamin D and calcium; and physical activity did not change. Clinical factors that suggest an association with greater increases in BMD include return of menses, use of progestin-only pill, and reduced numbers of feeds per day.

**Conclusions:** Spine BMD increases significantly during six months after lactation, with greatest gains in those who begin to wean sooner, have menses return, and who use a progestin-only contraceptive.

### P321

#### LONG TERM EFFICACY WITH THREE-MONTHLY INTRA-ARTICULAR HYALURONIC ACID (HYALUBRIX®) IN SYMPTOMATIC KNEE OSTEOARTHRITIS: PRELIMINARY RESULTS AT 24 MONTHS.

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**Introduction:** Osteoarthritis (OA) is the most common joint disease and the knee is one of the most frequently affected joints associated with activity limitations, need for walking devices and increased use of analgesic and non-steroidal anti-inflammatory drugs (NSAIDs). Hyaluronic acid (HA) is indicated for non-responders to non-pharmacological therapy, to analgesics or when NSAIDs are contraindicated.

**Objective:** To evaluate the long-term efficacy of a quarterly single intra-articular injection with Hyalubrix® (HA >1500 kDa, Fidia Farmaceutici Spa – Abano Terme (PD) Italy) in symptomatic knee OA.

**Materials and Method:** Fifty patients with symptomatic knee OA were enrolled in this longitudinal observational study. All patients were treated with a first 3-weekly regimen followed by a quarterly single injection with Hyalubrix®. The patients were assessed with the WOMAC score and NRS 0-10 pain scale at baseline (T0) and at each treatment (T1-T8). Kellgren-Lawrence grading (K-L) was assessed at baseline and at 24 months to evaluate radiographic disease progression. Descriptive analyses and GEE linear regression model was performed with SAS 9.3.

**Results:** Forty-seven of fifty patients have completed 24 months of follow-up. 3 patients withdrew from the study, one for accidental knee injury, one for spontaneous osteonecrosis (SONK), and the last for missing data. The mean age of the patients was 60.89±9.88 years; 63.8% of

the patients were female. At baseline 42.6% of patients was in K-L grade I, 27.6% in K-L II and 29.8% in K-L III. No radiographic changes were observed. During the study period, we found a progressive reduction in WOMAC (48.83±8.94 vs. 10.77±4.52) and NRS (6.32±1.09 vs. 1.00±0.88) values ( $<.0001$ ).

**Discussion:** The data presented show the 24 months' efficacy of Hyalubrix® in knee OA in terms of pain, functionality and radiographic progression. The GEE linear regression model used in this study showed that the treatment reaches its maximum between the sixth and ninth month when the effect is stable and remains unchanged until the twenty-fourth month.

### P322

#### UTILITY OF TERIPARATIDE IN THE AGED SPINE SURGERY

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**Objective:** Surgery for lumbar spine arthrodesis in elderly patients has experienced an increased frequency over the past few years; morbidity and mortality in this sense has been proven to be associated to the lack of bone quality and difficulties with fusion. Recombinant human teriparatide [rhPTH (1-34)], a drug used in the treatment of osteoporosis, has been proposed as a possible co-adjuvant treatment to improve these problems, thanks to its anabolizing effect on bone metabolism. In this study, we analyze the possible beneficial effect of teriparatide as co-adjuvant treatment in elderly patients with poor bone quality who have been operated due to lumbar degenerative disease with a posterolateral arthrodesis.

**Material and Methods:** We present a prospective clinical series of 60 patients of over 70 years of age in whom surgical posterolateral arthrodesis was carried out and who received teriparatide during 18 months as co-adjuvant treatment.

**Results:** In our series, we found a fusion rate of 95.1%, without observing any vertebral fractures, arthrodesis hardware failure (pull-out) or any other complications associated to bone failure. Moreover, a reduction in pain and in the disability in the VAS and ODI scales was verified after the combined treatment with surgery and teriparatide, which remained stable during follow-up.

**Conclusions:** In our series, we found promising results with a high rate of fusion, without recording any complications. Teriparatide could be a useful treatment when it comes to favoring lumbar arthrodesis by increasing mineral bone density. However, randomized studies with a greater number of patients are needed to demonstrate the possible beneficial effect.