

Abstract citation ID: luad146.017

P-12 Postpartum vertebral compressive fractures in a young female with osteoporosis - A case report

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Introduction: Osteoporosis is a metabolic disorder characterized by low bone mass and deep changes in bone architecture that lead to an increased vertebral or hip fracture in elderly.

Osteoporosis in young population is a very rare condition especially when is associated with compressive fractures.

Pregnancy and postpartum-related osteoporosis is condition that occurs in the last trimester of pregnancy or in the first months of lactation. It is self-limited condition that return to normal after 12-18 months. In rare cases leads to spinal compressive fractures. **Clinical Case:** We present a 33-year-old female with back pain that occurs after birth during the early lactation period. In consultation with an orthopedic surgeon, an X-ray was made on the thoracolumbar spinal column with a finding of vertebral compressive fractures.

A DEXA scan (double energy-X rays of absorptiometry) is also made with the finding of vertebral osteoporosis and hip osteopenia.

We calculate BMI and perform blood tests for vitamin D3, calcium, hormones and markers for bone metabolism. This was our patient's first birth, she was thin with height 157 cm, weight 42 kg and calculated BMI-17.

Blood test showed very low concentration of vitamin D3-16 ng/ml (20-44) with normal level of calcium- 1,20 mmol/l (1,10-1,40) and PTH-31,01 pg./ml (15-65). Thyroid, gonadal and adrenal axis was with normal function.

We told the patient to stop the lactation and to take a supplementation of vitamin D3 2000 IE, Calcium 1000 mg and bisphosphonates (alendronate).

After two years of treatment, we made a control DEXA scan. Our patient now has vertebral osteopenia, normal serum concentration of vitamin D (44 ng/ml) and her weight is 48 kg. She feels good, has no pain and no new fractures.

Conclusion: Pregnancy and lactation increase need for calcium and this condition is complemented by increased intestinal absorption of calcium and increased bone resorption of the mother's skeleton.

Risk factors for low bone density are deficit of 1-25 OH vitamin D3, malnutrition, low body mass index, treatment with low dose of enoxaparin (LMWH), physical inactivity.

Our patient has an increased risk of low bone density (she has a low body mass index, low serum concentration of 1-25 OH vitamin D3 and this was her first pregnancy).

Normal serum level 1-25 OH vitamin D concentration is required to establish calcium metabolism and prevent low bone density, osteopenia or osteoporosis.

Antiresorptive therapy with bisphosphonates lead to rapid improvement in bone density, prevent new fractures and relieves pain. Treatment of postpartum osteoporosis is debatable because this condition is reversible, so when we decide to treat or not to treat, we must consider present of fractures, pain and plan for future pregnancy.