24. Osteoporosis

AB0886

INCIDENCE OF FRACTURES IN A BARIATRIC SURGERY COHORT

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Background: Bariatric surgery is the set of surgical techniques whose objective is weight reduction, and it could have complications. One of them may be the increase in the incidence of fractures (1), secondary to nutritional defects (2), among others, that could modify bone metabolism with an increase in remodeling (3).

Objectives: To carry out a retrospective observational pilot analysis of a cohort of 140 morbidly obese patients after bariatric surgery, of a total of 304, descriptive of axial and peripheral fractures, among other variables.

Methods: Data were collected from the University Hospital of Fuenlabrada of a cohort of morbidly obese people who underwent bariatric surgery from 2009 to the present. Were included as variables age in years, sex, body mass index (BMI) before surgery, evolution time since surgery in years, incidence of sleep apnea syndrome (OSAS), incidence and type of fracture, osteoporotic or not, and axial or peripheral. A descriptive and frequency analysis, and a chi-square contingency table between incidence of fracture, and gender, OSAS, or childhood obesity, were performed.

Results: A 48.76 years old cohort was observed, 25.7% men/74.3% women, 30.8% childhood obesity, BMI of 45.65 kg / m², and 45% with a diagnosis of OSAS. A 15% of fractures were noted: 66.66% considered as osteoporotics (40.76% axial, 50.31% peripheral, and 8.93% of both) in a time of evolution of 5.81 years, and without relationship with gender, OSAS or childhood obesity (p = 0.7, p = 0.15, p = 0.16).

Conclusion: It is a study that highlights that bariatric surgery in Fuenlabrada area is mainly performed on morbidly obese women in adulthood. There is a high rate of OSAS, and an increase in the incidence of fractures unrelated to gender, OSAS or childhood obesity, despite the fact that in the bariatric surgery protocol densitometric osteoporosis is an exclusion criterion.

References:

- [1] Rousseau C, Jean S, Gamache P, Lebel S, Mac-Way F, Biertho L, et al. Change in fracture risk and fracture pattern after bariatric surgery: nested case-control study. *BMJ*. 27 July 2016;354:i3794.
- [2] Scibora LM. Skeletal effects of bariatric surgery: examining bone loss, potential mechanisms and clinical relevance. *Diabetes Obes Metab* 2014;16:1204-13. doi:10.1111/dom.12363 pmid:25132010.
- [3] Coates PS, Fernstrom JD, Fernstrom MH, Schauer PR, Greenspan SL. Gastric bypass surgery for morbid obesity leads to an increase in bone turnover and a decrease in bone mass. *J Clin Endocrinol Metab* 2004;89:1061-5. doi:10.1210/jc.2003-031756 pmid:15001587.

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PATIENTS DEMOGRAPHIC CHARACTERISTICS WITH ESTABLISHED OSTEOPOROSIS TREATED WITH DENOSUMAB IN A THIRD LEVEL HOSPITAL

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Background: Osteoporosis (OP) is the most common cause of fragility fractures. It is characterized by a loss of bone mass that modifies the bone microstructure, increases fragility and predisposes to fractures. There are numerous risk factors for fragility fracture that must be evaluated for diagnosis and treatment. The treatment consists of non-pharmacological measures (balanced diet and exercise), adequate intake of calcium and vitamin D and specific pharmacological treatment (bisphosphonates, teriparatide, denosumab or selective estrogen receptor modulator) 1-3.

Objectives: To perform a descriptive evaluation of the demographic and clinical characteristics of patients with osteoporosis treated with Denosumab, their degree of compliance with the therapy as well as the evaluation of the possible causes of treatment cessation.

Methods: All patients diagnosed with OP from January 2015 to January 2020 have been reviewed in the Rheumatology Service of the University Hospital of Santiago de Compostela and patients treated with denosumab have been selected. Demographic, clinical and treatment data have been collected from data collected in their electronic medical record

Results: Of the 507 patients diagnosed with Osteoporosis from January 2015 to January 2020, a total of 133 patients (26.2%) have received treatment with Denosumab. The majority are women (92.5% n = 122) with a mean age of 76 years (age range: 49-105 years). Previously, 38% (n = 51) had vertebral fractures, with 8% (n = 11) standing out who had presented 3 or more vertebral fractures prior to Denosumab treatment.

The mean time to start Denosumab therapy since the diagnosis of Osteoporosis (by Densitometry or established by fractures) has been 35 months (0 to 84 months from diagnosis)

Through the electronic Medical Record the dispensations were accessed in the Denosumab pharmacy office and its administration in Primary Care was verified. Complete adherence to treatment (without skipping any dose) was observed in 73% of patients (n = 97). In 5.2% (n = 7) an omission was avoided. In 21.8% (n = 29) 2 or more dose omissions were corroborated 9 patients (6.8%) completed treatment with Denosumab in the follow-up period (55% due to the need for dental interventions, 33% for loss of follow-up and 12% for fear of secondary effects).

In 66 patients (49.6%) risk factors were identified to present Osteoporosis; being corticosteroid therapy at doses greater than 5 mg / day of Prednisone or equivalent (26% n = 33) the most frequently identified risk factor.

No vertebral fractures were registered at the end of treatment with Denosumab, with an average time since the end of treatment of 2.77 years (6 months - 8 years).

Conclusion: The rate of patients diagnosed with Osteoporosis who receive Denosumab therapy at some time reaches 26%, being the most frequent drug used after bisphosphonates.

Complete adherence to treatment has been observed in 73% of patients.

We have not observed vertebral fractures after suspension of Denosumab in our series of patients, although the total exposure time (from the end of treatment to the end of follow-up) is short: 2.77 years

References:

- [1] Passini M. Osteoporosis diagnosis and treatment. *Rev Bras Ortop*. 2010;45(3):220-229.
- [2] Lems WF, et al. EULAR/EFORT recommendations for management of patients older than 50 years with a fragility fracture and prevention of subsequent fractures. *Ann Rheum Dis*. 2017;76:802-810.
- [3] Naranjo A, et al. Recomendaciones de la Sociedad Española de Reumatología sobre osteoporosis. *Reumatol Clin*. 2019;15(4):188-210.

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REASONS FOR LETHALITY IN ELDERLY AND SENIOR AGE PATIENTS WITH OSTEOPOROTIC FRACTURES OF FEMUR

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Objectives: to identify the causes of mortality in middle-aged and elderly patients during the first year after they had a low-energy hip fracture.

Methods: the causes of lethality were examined of the patients with a non-traumatic femur fracture. 432 patients with osteoporotic hip fractures were under observation: 328 women and 104 men. The mean age of women was 75, 4 (70; 82) years, the mean age of men was 71,5 (65; 80) years.

Results: after 12 months, mortality rate was 137 cases (total mortality - 31.8%). Most of the deaths were due to cardiovascular system diseases. The total number of fatal cases was 93 (67.8%): for men - 22 (66.0%) cases, for women - 71 (68.3%) (p = 0.65). Diseases of the respiratory system caused death in 23 (16.8%) patients: in men - 5 (15.1%) cases and in women - 18 (17.3%) (p = 0.31). Mortality from oncological diseases was 15 (10.9%) cases: in men - 3 (9.09%) cases and in women - 12 (11.5%) (p = 0.45). Diseases of the digestive system, as the cause of death, were detected in 5 (3.6%) men and women (2 (6.06%) and 3 (2.9%) cases, respectively (p = 0.1)).

Conclusion: the most of the deceased men and women had cardiovascular and respiratory diseases. The gender differences in mortality rates were not found.

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