INCIDENCE AND DETERMINANTS OF VERTEBRAL AND PERIPHERAL FRACTURES IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS: A PROSPECTIVE LONGITUDINAL COHORT STUDY

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Background: Systemic lupus erythematosus (SLE) is associated with an increased risk of fractures1. However, data on the incidence of vertebral and peripheral fractures are limited. In particular, data on (morphometric) vertebral fracture incidence and determinants of such fractures are scarce and show conflicting results.

Objectives: To assess the incidence of fractures in a population of patients with SLE, and to identify determinants that predict incident vertebral and peripheral fractures.

Methods: A prospective longitudinal cohort study in 145 patients with SLE was performed. Serial bone mineral density (BMD) measurements using dual x-ray absorptiometry, and radiographs of the thoracic and lumbar spine were performed at inclusion and after a median of 5 years (IQR 3–5) follow-up. Demographic and clinical data were also collected. Vertebral fractures were scored according to the semi-quantitative method by Genant et al. Reported peripheral fractures were confirmed by x-rays. Analyses were performed with logistic regression (forward selection procedure, p-value of 0.05 as cut-off level). The outcome measures were incident fracture in general (yes/no), vertebral fracture (yes/no), and peripheral fracture (yes/no).

Results: Of the 145 included patients, 131 (90%) were females and 100 (69%) Caucasian. The mean age was 41 years (SD 12) at baseline, and median follow-up was 7.2 years (IQR 6–12). A total of 42 incident fractures (vertebral and peripheral) occurred during 998 patient years. The incidence rate of vertebral and peripheral fractures in SLE patients compared to the general population1–3. Age, Caucasian ethnicity and postmenopausal status are important risk factors for incident fractures in SLE. In addition, special attention should be paid to SLE patients with a history of stroke since this subgroup of patients is at high risk of peripheral fractures.

REFERENCES:


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SPONTANEOUS VERTEBRAL FRACTURE AFTER DENOSUMAB DISCONTINUATION: A REPORT OF 6 CASES

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Background: Denosumab (Dmb) is an antiresorptive treatment with demonstrated efficacy in osteoporosis. However, discontinuation of Dmb has been associated with rapid bone loss, and recently, the development of vertebral fractures (VF) in some patients. It is essential to identify the risk factors for these adverse events and follow its evolution.

Objectives: To analyse the clinical characteristics, parameters of bone metabolism and evolution of patients developing VF after Dmb discontinuation.

Methods: Six women with spontaneous VF after Dmb discontinuation were included (median age 66 years3(–7)). The clinical history, cause of osteoporosis, treatments received, fractures, Dmb treatment duration and discontinuation period were reviewed. Additionally, the clinical and densitometric evolution, and bone mineral parameters were also analysed after Dmb discontinuation.

Results: All the patients had postmenopausal osteoporosis, and one was receiving glucocorticoid treatment; 3/6 patients had previous fractures (2 VF and 1 calcaneus); 4/6 had previously received antiresorptive treatment (hormone replacement therapy, risedronate, alendronate, zoledronate (once or consecutively)) during 1–23 years. All had received Dmb for 24–53 months (median 37). The reasons for treatment discontinuation were: dental indication (1 patient), BMD improvement (T-score –1.2) (1 patient), poor adherence,1 prescription problems and/or delay in administration.1,2 The median bone mineral density T-scores prior to VF were –2.6(–1.2—to –4) at the lumbar spine and –3.0(–0.6—to –3.7) at the femoral neck. The mean time between the last Dmb dose and VF was 9.5 months,6–20 with a median of 5 VFs/patient.2,1,1 No patient showed 25-OH vitamin D<20 ng/ml.

After Dmb discontinuation, bone turnover markers increased (median increase +364% in PINP and +287% in NTx); one patient presented hypercalcemia (Ca 11.3 mg/dl); and BMD decreased 1%–5% in the lumbar spine and 2%–6% in total hip at 8–19 months. After VF, 3 patients restarted Dmb, 1 received zoledronate and 2 alendronate. No new fractures occurred during follow-up.

Conclusions: Discontinuation of Dmb is associated with an increase in bone turnover markers and bone loss which can be associated with the development of spontaneous VF. Previous bisphosphonate therapy does not seem to decrease this risk. Further studies are needed to assess the optimal antiresorptive treatment and its duration after Dmb discontinuation.

Disclosure of Interest: None declared


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FACTORS ASSOCIATED WITH THE INITIATION OF TREATMENT AFTER FRAGILITY FRACTURE IN A FRACTURE LIASON SERVICE

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Background: Adherence to treatment in osteoporosis (OP) is not adequate, so that in the first year the percentage of suspensions is between 30% and 50%, up to an adherence of 20% at 3 years. In 2012, we started in Gran Canaria a Fracture Liaison Service (FLS).

OBJECTIVE: To assess the factors associated with the suspension of OP treatment before the initiation of FLS.

Methods: A retrospective case–control study of 33 patients (20 females) who started OP treatment after sustaining a fragility fracture, during 2014–2017, compared to 20 patients who did not start OP treatment. The factors assessed were: age, sex, history of previous OP fracture, length of hospital stay (LOS), smoking status, alcohol intake, previous bisphosphonate therapy, and use of glucocorticoids.

Results: The main factors associated with suspension of OP treatment before the initiation of FLS were age (odds ratio 0.017; 95% CI 0.01–0.27), previous OP fracture (OR 1.1; 95% CI 1.0–2.2), alcohol intake (OR 1.1; 95% CI 1.0–2.2), and length of hospital stay (OR 1.0; 95% CI 1.0–1.1).

Conclusions: Age, previous OP fracture, alcohol intake, and length of hospital stay are factors associated with the suspension of OP treatment before the initiation of FLS.