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AB0894

OBSERVANCE OF ZOLEDRONIC ACID INFUSION. A RETROSPECTIVE 3 YEARS STUDY

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Background: Osteoporosis is a public health issue. Lack of therapeutic compliance is often a problem in the treatment of osteoporosis, with potentially dramatic consequences. No studies have evaluated the observance of zoledronic acid infusion after 3 years, the time of the therapeutic reassessment.

Objectives: The main objective of assessing the level of compliance was to evaluate the level of zoledronic acid infusion adherence at 1, 2 and 3 year periods, in a cohort of osteoporotic patients on discharge from Bégin hospital, following treatment for fracture caused by low-energy trauma. The first infusion was prescribed by rheumatologists, with the following infusions to be prescribed by general practitioners.

Methods: We performed a retrospective observational study initially conducted by written and telephone questionnaires on a population of patients hospitalized in the rheumatology department of HIA Bégin for an osteoporotic fracture. Data was collected between July 2015 and December 2018. A first letter, containing a stamped addressed envelope to the Bégin hospital for ease of reply, was sent to the patients selected for the study. The protocol had to be modified following a very low response rate, unaided by bad quality addresses. We then tried to contact the patients by phone 3 times and, if unable to reach them, we called their general practitioners on 3 occasions.

Results: 94 patients were initially selected. Every year, we retained within the study patients who had followed their annual zoledronic acid infusion protocol. Taking into account all 94 patients, adherence level for the first infusion was 41.4%, down to 29.7% for the second infusion and down to 12.8% for the third infusion.

For those who had the first infusion performed, adherence level for the second infusion was 71.8%, down to 30.8% for the third infusion.

Conclusion: The observance and follow-up of zoledronic acid infusion in France by general practitioners is not adequate. Follow-up measures on an annual basis by the rheumatologist could significantly improve adherence.

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AB0895

RELATIONSHIP BETWEEN BONE MINERAL DENSITY, INFLAMMATORY ACTIVITY AND AUTOIMMUNITY IN A COHORT OF EARLY RHEUMATOID ARTHRITIS PATIENTS

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Background: The etiology of bone loss in Rheumatoid Arthritis (RA) is multifactorial and systemic inflammation plays a relevant role. Recently, a relationship between autoimmunity and bone mineral density (BMD) has been described in patients with RA.

Objectives: To study BMD and biochemical parameters of bone metabolism in a cohort of patients with early rheumatoid arthritis, and assess the relationship between them and autoimmunity and other markers of inflammation.

Methods: A prospective longitudinal study was performed. 128 patients from an early Rheumatoid Arthritis Unit (ERAU) were included. All of them fulfilled ACR 2010 classification criteria for RA. Demographic, clinical, biochemical, immunological, radiological and densitometric data, and also inflammatory activity index DAS 28, HAQ functional index, were collected. Any value >20 IU/mL for RF and >30 IU/mL for ACPA was defined as positive.

Results: Between January 2009 and June 2017, 801 patients were evaluated in our ERAU. After two years of follow-up, the most frequent definitive diagnoses were: Early RA 221 (27.6%), Undifferentiated Arthritis 97 (12.1%), Psoriatic Arthritis 62 (7.7%), Spondyloarthritis 54 (6.7%) and autoimmune Diseases 28 (3.4%).

From the 128 patients with early rheumatoid arthritis evaluated, 104 (81.9%) were ACPA positive and 98 (77.2%) FR positive. The mean BMD in the total column was 0.96 ±0.14 g/cm² and in the femoral neck was 0.76 ±0.12 g/cm². No correlation of BMD with autoimmunity markers was found in either of the two locations studied, while a negative relationship between BMD and the PCR inflammation marker (BMD femoral neck: rho=0.203, p = 0.027 and BMD lumbar spine rho =-0.27, p 0.003) was found. The BMD did not correlate with DAS28 nor the HAQ index.

The mean baseline serum calcidiol value was 20.7±8 ng/ml, and a negative correlation of basal serum calcidiol with the functional HAQ index was observed (rho=-0.23, p= 0.008). No correlation between other autoimmunity (FR and ACPA) and inflammation (VSG, PCR and DAS 28) markers and vitamin D was found.

Conclusion: The BMD in patients with early rheumatoid arthritis of our cohort correlates with the PCR inflammation marker. Unlike other studies shows, in our cohort, serological autoimmunity factors do not have shown to have an independent effect on BMD.

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AB0896

EFFECTIVENESS OF SACROPLASTY IN THE MANAGEMENT OF OSTEOPOROTIC SACRAL FRACTURE IN ELDERLY PATIENTS

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Background: Sacral fractures are a source of pain leading to loss of autonomy in elderly patients. Sacroplasty may be an effective alternative of conservative medical treatment.

Objectives: To evaluate the short-term analgesic effect of sacroplasty compared to conservative treatment in patients with osteoporotic sacral fractures

Methods: This is a retrospective study of cases of osteoporotic sacral fractures treated with sacroplasty, compared with cases treated with conservative medical procedure over the same period. Outcome was evaluated by pain (Visual analogic scale) short-term (one month) evolution and side effects occurrence.

Results: From January 2009 to June 2019, eleven patients were treated with sacroplasty for osteoporotic fractures at the Besançon University Hospital Centre. These were compared to 12 patients with osteoporotic sacral fracture with exclusive medical management, as a control group. The two groups were similar in age, gender and pain level at baseline. The median VAS was 7/10 in both groups at baseline. In the sacroplasty group, a significant decrease of pain was observed over the two first weeks, with a tendency remaining at day 30. There were no significant differences in the conservative treatment group at one week (p=0.2), fourteen days (p=0.6) and thirty days (p=0.7) compared to basal assessment.

When comparing the sacroplasty group and the conservative treatment group, no differences were noted at baseline between the two groups, there was a significant difference between the two groups the following day (p=0.001), one

week ($p=0.003$) and day 15 ($p=0.01$) after the intervention. However, there was no significant difference between the two groups at day 30, but only a trend ($p=0.08$).

Regarding analgesic treatments, 30% of patients in the sacroplasty group could reduce their analgesics between the time they entered and left hospital. None of the patients in the control group were able to reduce their analgesic treatment over this period. In addition, half of the patients in the sacroplasty group were successful in returning home compared to only one-third of the patients in the conservative treatment group.

Conclusion: In this study, sacroplasty was associated with an early and significant pain relief compared to conservative management in patients with osteoporotic sacral fracture. The procedure is well tolerated and may prevent loss of autonomy in these patients.

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AB0897

BIMODAL DISTRIBUTION OF VERTEBRAL FRAGILITY FRACTURES (VFF) IN A FRACTURE LIAISON SERVICE (FLS). RESULTS OF A COMPARATIVE ANALYSIS OF PATIENTS WITH VFF VERSUS THOSE WITH OTHER FRAGILITY FRACTURES (OFF).

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Background: Fragility fractures (FF) represent a health problem and among them, the VFF. They have worse vital prognosis, are at greater risk of new FF, had higher comorbidity, with clinical manifestations in only 30%-40% of cases. One in 6 women and one in 12 adult males will have a VFF.

Objectives: To analyze the clinical characteristics of FF patients attended in the FLS at Virgen Macarena University Hospital. Compare the sociodemographic and clinical characteristics of VFF patients with those with OFF.

Methods: Design: Prospective cohort. Patients attended in the FLS from May 2018 to November 2019 in a protocolized manner (Openclinica®). Inclusion criteria: a clinical FF in the previous two years. Descriptive statistics: percentages and means with 25th and 75th percentile. Inferential statistic by parametric and nonparametric tests. The project was approved by the Ethics Committee and patients signed consent to participate.

Results: Data from 414 patients with a first FF are analyzed, 101 (25%) with VFF and 313 (76%) with OFF [188 (45%) hip, 66 (16%) distal radius, 32 (8%) humerus and 27 (6%) miscellaneous (pelvis, ribs, tibia)]. All VFFs analyzed had clinical symptoms and the number of fractured vertebrae was 2 (1-3). In 28 (37%) were FF of dorsal vertebrae, at 25 (33%) lumbar and 23 (30%) dorsal and lumbar. Comparative analysis showed differences in age VFF 71 (62-77) vs OFF 76 (66 – 83) years, $p=0.0003$. It highlighted a bimodal distribution according to age, with a peak incidence of 55 to 68 years and another between 75-80 years (Graph). Referral unit to FLS: VFF Rheumatology (42%) and/or Traumatology Emergency Room (44%) vs OFF Internal Medicine (45%) and General Traumatology Unit (38%), $p=0.0001$. There were also differences in the treatment with teriparatide (VFF 20% vs OFF 4%); zoledronate (VFF 6% vs OFF 3%) and alendronate (VFF 44% vs OFF 63%, $p=0.0001$); days of immobilization (VFF 30 (0 - 60) vs OFF 10 (0 - 30), $p=0.01$); they have greater independence to carry out activities of daily life (Barthel Scale) VFF 95(81 – 100) vs OFF 80 (60 – 95), $p=0.00001$; increased clamping force of hands 18 (12 - 20) vs 12 (8 - 18) mmHg, $p=0.001$, and lower risk of falls (J D Downton Scale) (VFF 43% vs OFF 60%, $p=0.01$). While the number of relevant comorbidities was higher in VFF 3 (1 - 5) vs OFF 2 (1 - 4) it was not statistical, $p=0.3$. The use of GCC was risky for VFF ($n=13$, 13%) vs OFF ($n=17$, 5%), $p=0.01$ and RR (95%CI) 2.3 (1.01 – 5.3) and not for other drugs (GnRH inhibitors, aromatase inhibitors or chemotherapy). No differences in sex were found (VFF 80%- vs OFF 80% women, $p=0.9$), previous FF history (9% vs 12%, $p=0.2$), secondary OP (16% vs 21%, $p=0.1$); percentage of patients with OP by femoral neck DEXA (VFF 35% vs 42%, $p=0.2$) or by lumbar spine DEXA (VFF 36% vs OFF 34%, $p=0.8$).

Conclusion: VFF have a bimodal age-based distribution, usually occurring in younger patients, with a higher degree of independence and muscle strength and lower risk of falls, although they are associated with longer duration of immobilization, compared to OFF. In our cohort, VFFs affect 2 or more vertebrae and they are commonly treated with parenteral osteoporotic drugs. The use of glucocorticoids doubled the risk of developing a VFF, these findings are similar to those of others published cohorts.

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AB0898

IMPACT OF BIOLOGICAL AGENTS, ORAL GLUCOCORTICOIDS, OR BOTH ON THE EFFICACY OF DAILY TERIPARATIDE TREATMENT FOR OSTEOPOROSIS IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Daily teriparatide (dTP) strongly affects bone metabolism in patients with rheumatoid arthritis (RA), resulting in increased bone mineral density (BMD). We reported the 2-year results of dTP treatment for osteoporosis (OP) in patients with RA in EULAR2014 [1]. Drugs affecting bone metabolism, such as biological agents (BIOs) and glucocorticoids (GCs), are frequently administered to patients with RA in addition to dTP in daily clinical practice. Although dTP increases bone turnover, BIOs reduce osteoclast activity and GCs decrease bone turnover. We reported the effects of GCs or BIOs on the efficacy of dTP in EULAR2015 [2]. The present retrospective study investigated the effects of GCs or BIOs on the efficacy of dTP in patients with RA using a larger patient cohort.

Objectives: To evaluate the effects of BIOs, GCs, or both on the efficacy of dTP treatment for OP in patients with RA.

Methods: The study included 56 female patients who had completed 2 years of dTP treatment. We separated these patients into four groups according to their treatment regimen at dTP initiation: B(-)G(-), included patients who did not receive BIOs or GCs ($n=14$); B(+)G(-), included patients treated only with BIOs ($n=8$); B(-)G(+), included patients treated only with GCs ($n=24$); and B(+)G(+), included