Methods: Retrospective review of patients seen between July 2018 and July 2019 at Purley Memorial Hospital, covering a large urban borough. Patients included in the study had prevalent moderate and severe VFFs (defined by Ghent criteria).

Results: 84 patients were included, of which there were 71 females and 13 males. Median age was 76 (IQR 67 – 82) and BMI was 25 (IQR 21 – 27), with 6% of patients noted to be underweight (BMI <18.5). 38% of patients had a family history of osteoporosis and 21% of patients reported a history of parental hip fracture. 21% of patients had experienced recurrent falls. Over half (56%) of patients were noted to have had 2-or-more previous fragility fractures. Of the female cohort, 24% had early menopause, 13% were nulliparous and 1% had late menarche. Of the modifiable risk factors, alcohol (24%), sedentary lifestyle (21%) and smoking (13%) were the most common. Thyroid-disease (18%) was the most common medical condition associated, followed by coeliac/malabsorption (7%), endocrinopathy (6%) and COPD (6%). Proton Pump Inhibitors (PPIs) and steroids were the most common medications associated with 16% and 14% of cases respectively. 73% of patients had good calcium intake and 62% had calcium supplements. Overall, 27 patients had 3-or-fewer risk factors, 35 patients had 4-to-6 risk factors, 19 had 7-to-9 risk factors, and 3 had greater than 10 risk factors.

Conclusion: Our study identified several risk factors and their prevalence. The majority of patients were female, of which 24% had early menopause. Several modifiable risk factors such as low BMI, alcohol, smoking and sedentary lifestyle were commonly seen, emphasising the need to identify these risk factors in the initial consultation. Over half of patients (56%) had had 2-or-more previous non-VFFs, suggesting the need to screen for VFFs in patients with multiple fragility fractures at baseline assessment. A number of co-existing medical conditions were also observed with thyroid disease being the most prevalent. PPIs and steroids were found to be important risk factors, which may lead to the consideration of alternative medications. Overall, it was found that patients had multiple risk factors, thus it is important to have a holistic assessment of VFF patients and a multi-system management approach to prevent future fractures.

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AB0617

BISPHOSPHONATES DANS L'OSTÉOPOROSE ET LE RISQUE D'OSTÉONÉCROSE DE LA MÂCHOIRE, ENVIRON 896 CAS

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Background: Bisphosphonates (BF) are used in the treatment of osteoporosis, Paget's disease of bone, hypercalcemia and in patients with cancer. When used to treat osteoporosis, the optimal duration of treatment is 3 to 5 years; however, their long-term use has been rarely associated with osteonecrosis of the jaw.

Objectives: To assess the risk of developing osteonecrosis of the jaw in patients followed for osteoporosis and on bisphosphonates (BP).

Methods: Type of study: retrospective study conducted at the rheumatology department of the IBN ROCHD CHU in Casablanca.

Duration: from October 2013 to October 2020 (7 years).

Inclusion criteria: all patients followed for osteoporosis in the weakening osteopathies unit of the bone and treated with oral or intravenous bisphosphonates. Exclusion criteria: patients followed for other than osteoporosis.

Results: 896 patients were treated during this period. The average age was 62.74 years (28 to 90 years), of which 85.16% were women and 14.84% were men, for a sex ratio (F / M) of 5.74. As a history, 18.75% of patients are diabetic, 26.56% followed for breast neoplasm, 14.06% of patients had received long-term corticosteroid therapy for various pathologies such as chronic inflammatory rheumatism. Osteoporosis was postmenopausal in 687 patients, ie 76.67% of cases, 14.06% after long-term corticosteroid therapy, 8.15% following hormone therapy (anti-aromatases) and 6.92% following chemotherapy; note that 18.16% of these patients were found in at least two of the situations. The mean bone mineral density (BMD), T-score pair considered in all [T-score (BMD)] is -3 (0.736) in the lumbar spine (L1-L4), -2.9 (0.658) at the femoral neck, -2.6 (0.804) at the total hip before the start of treatment. 69.97% of the patients were put on Alendronic acid, 12.50% on Residronic acid, 10.93% on Zolidronic acid, 3.46% on Pamidronic acid and 3.14% received Strontium Ranelate, note that before the start of the treatment all the patients benefited from a dental consultation followed by care of any lesions, the bisphosphonates were only introduced after having ruled out all their dental contraindications, the average duration of treatment for all the molecules was 4.71 years (2 to 5 years) and no patient developed osteonecrosis of the jaw. The change in control BMD on average after 2 years of treatment was -2.7 (0.782) at the lumbar spine, -2.6 (0.749) at the femoral neck and -2.4 (0.713) at the hip total, after 5 years -2.4 (0.874) at the spine, -2.1 (0.809) at the femoral neck and -1.93 (861) at the total hip.

Conclusion: The occurrence of ONJ in the treatment of osteoporosis with the use of BFs is rare, and appears to be unpredictable; but maintaining therapeutic

caution, consisting in diagnosing and treating any dental lesions before starting treatment, can considerably reduce or even cancel the risk of occurrence; especially in patients treated with long-term intravenous pamidronate.

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AB0618

GLUCOCORTICOID INDUCED OSTEOPOROSIS PREVENTION IN THE OUTPATIENT RHEUMATOLOGY CLINIC

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Background: Patients with rheumatic disease are at risk of developing glucocorticoid induced osteoporosis (GIOP) as many are prescribed systemic oral glucocorticoids as an adjunct to their maintenance therapy. Based on the 2017 ACR Guideline for the Prevention and Treatment of Glucocorticoid-Induced Osteoporosis, a good practice recommendation exists that "initial clinical fracture risk assessment should be performed as soon as possible, but at least within six months of the initiation of long term glucocorticoid treatment."¹ Long-term glucocorticoid use is defined by duration of 3 months or greater. Fracture risk assessment should include dual energy-ray absorptiometry (DEXA) scan. Patients on greater than or equal to 2.5mg of prednisone should be treated with an optimal dose of calcium and vitamin D and may benefit from oral bisphosphonate as primary prevention against GIOP if their fracture risk is moderate to high.¹

Objectives: The aim of this Quality Improvement Project is to assess the current status of provider implementation of GIOP recommendations in the rheumatology clinic. Ultimate goal is to improve osteoporosis prevention in the rheumatology clinic.

Methods: We conducted a retrospective chart review of 60 patients in two outpatient rheumatology clinics. Clinic 1 follows patients with lower socioeconomic status and Clinic 2 follows patients with higher socioeconomic status. Inclusion criteria were patients on long-term glucocorticoid use, defined as at least 3 months of corticosteroid use of at least 2.5mg prednisone daily, as well as age less than 65. Females aged 65 or older were omitted to prevent overlap of the United States Preventative Taskforce recommendation for all women ≥ 65 years to be screened for osteoporosis with DEXA scans.² DEXA scan orders, calcium and vitamin D prescriptions, and osteoporosis medication prescriptions were abstracted. After baseline data obtained, intervention of education of the rheumatology fellows and faculty, and internal medicine residents in the guidelines for GIOP prevention was implemented. In addition, a smartphrase in the electronic medical record was created for provider use when treating patients on chronic corticosteroids. Subsequently, two audit cycles were completed for retrospective chart review.

Results: Upon completion of second audit cycle, there was no change in percentage of DEXA scan orders at Clinic 1, however there was a 10% overall improvement in DEXA scan orders in the Clinic 2.

In terms of Calcium and Vitamin D prescriptions, there was an overall improvement in both clinics of 19.7% and 13.3% in Clinics 1 and 2 respectively after the second audit cycle.

Additionally, there was a 3.4% increase in osteoporosis medication prescriptions overall subsequent to the second audit cycle in Clinic 1. However in Clinic 2 there was an overall decrease in osteoporosis medication prescriptions of 6.6%.

Clinic 1	Prior to Audit	Audit cycle 1	Audit cycle 2
Patient percentage without DEXA scan orders	30%	33.30%	30%
Patient percentage without Vitamin D/Calcium orders	26.40%	8.30%	6.70%
Patient percentage with osteoporosis medication orders	23.30%	8.30%	26.70%
Clinic 2			
Patient percentage without DEXA scan orders	50%	37.00%	40%
Patient percentage without Vitamin D/Calcium orders	30%	26.00%	16.70%
Patient percentage with osteoporosis medication orders	23.30%	11.10%	16.70%

Conclusion: Overall, the results of the intervention were strongest for improvements in Vitamin D and Calcium orders in both clinics. Improvements in DEXA scan orders and osteoporosis medications were present in Clinic 2 and not present in Clinic 1. This reveals continued efforts and education of providers need to be made for improvement in bone health monitoring.

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