Conclusions: Exposure to Bisphosphonates remains a major risk factor for development of AFF but our case series has shown that other risk factors do play an important part eg. prolonged courses of glucocorticoids and Proton pump inhibitor therapy. It is plausible that bisphosphonates are given for prolonged courses in patients on glucocorticoids and this combination seems to be a particular risk. The risk appears to be greater with multiple risk factors. The temporal relationship of fractures with relation to bisphosphonate therapy cannot be determined as it can happen even after the cessation of therapy. Further longitudinal and larger studies are required to identify whether Bisphosphonate would play a role to reduce the risk of Atypical Femoral fractures.

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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.7058

THU0494 THE EFFICACY OF DENOSUMAB IN GLUCOCORTICOID-INDUCED OSTEOPOROSIS DID NOT DEPEND ON PRIOR TREATMENT BUT WAS AFFECTED BY THE DOSAGE OF GLUCOCORTICOID

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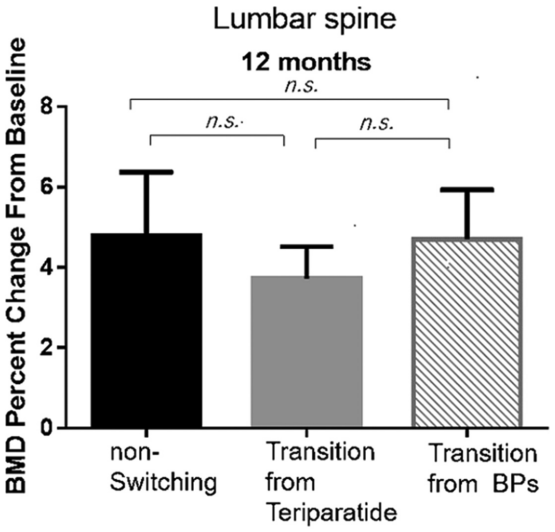
Background: Despite of the good clinical efficacy of denosumab for primary osteoporosis, 2017 American College of Rheumatology guideline for treatment of glucocorticoid-induced osteoporosis (GIOP) placed denosumab as second-line treatment because of lack of clinical experiences with concomitantly use of immunosuppressive agents. Moreover, recently large phase 3 study in primary osteoporosis revealed that transition from teriparatide to denosumab continuously increased bone mineral density (BMD)[1] However, there is still remain unclear whether prior treatment affect to the efficacy of denosumab in GIOP.
Objectives: The aim of this study is to compare the therapeutic effect of denosumab in GIOP between previous anti-osteoporotic treatments, and to investigate the factor that influence the efficacy of denosumab in GIOP.
Methods: Sixty-six patients for whom treated by denosumab, were enrolled. All patients were receiving several dosages of predonisolone (PSL) (2–20 mg) for RA and connective tissue diseases at initiation of denosumab. 23 patients had been treated with daily teriparatide and 27 patients had been treated with bisphosphonate (BPs) prior to denosumab. The rest 16 patients had not been treated by anti-osteoporosis medication at initiation of denosumab. We evaluated BMD at lumbar spine and bone turnover markes (NTX, BAP and P1NP) every 6 months for 12 months. The changes in BMD was compared among these 3 groups at 6 months and at 12 months. To assess the factors which influences clinical response of denosumab in GIOP, univariate and multivariable ordinal logistic regression analyses were used.
Results: Mean percentage change in BMD of lumbar spine from baseline to 6 and 12 months were significant (2.85% increased; p<0.0001% and 4.40% increased; p<0.0001, respectively) Gains higher than 3% were observed in 68.2%. Whereas, the subjects who showed decrement of BMD at 12 months were few (16.67%). All bone turnover markers determined in this study were decreased at 6 months. Transition from BPs to denosumab further increase BMD at 12 months as compared to transition from teriparatide to denosumab (4.71% increased, 3.71% increased, respectively). However, difference among these 2 groups was not significant and furthermore, the changes in BMD in patients who did no transition from anti-osteoporosis medication to denosumab also showed no significant difference (figure 1). Univariate analysis showed that dosage/duration of PSL, body weight and gender were associated with BMD increase higher than 3% at 12 months. Among these candidates, multivariable logistic analysis showed that dose of PSL was independently associated with clinical response of denosumab (OR 1.36, 95% CI 1.045–1.761 P<0.01). No hypocalcemia and osteonecrosis of the jaw was observed during the study period.



Conclusions: Our present study demonstrated that denosumab increased BMD in GIOP regardless of prior anti-osteoporotic treatment in 'real-world' settings. We should consider denosmab treatment for GIOP, especially who are treated by much dose of glucocorticoids or at the time when the efficacy of BPs is diminished.

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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.6430

THU0495 INDICES OF VERTEBRAL PAIN SYNDROME, PHYSICAL PERFORMANCE AND QUALITY OF LIFE IN OLDER AGE WOMEN WITH VERTEBRAL FRACTURES DEPENDING ON THEIR QUANTITY AND LOCALIZATION

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Background: Nowadays, vertebral fractures (VF) are one of the frequent and severe complications of systemic osteoporosis, which lead to severe spine pain, restriction of physical activity, increased disability and mortality, however, the data about their particularities depending on their quantity and localization are limited. The purpose was to study the indices of vertebral pain syndrome, physical performance, disability and quality of life in women of older age groups with VF depending on their number and localization.
Objectives: We examined 230 women aged 50–89 years old, which were divided into 2 groups: I – patients without any history of osteoporotic fractures (n=151), II – women with VF at thoracic and/or lumbar spine (n=79). Subsequently, the persons of the second group were divided into subgroups depending on the number (1 or 2 and more) and localization (thoracic, lumbar spine or combined) VF.
Methods: The presence and intensity of pain in the thoracic and lumbar spine were evaluated using the 11-component visual analogue scale (VAS), the level of physical performance was evaluated using static and dynamic functional tests (FT) (Thomayer, Schober tests, chest excursion, lateral trunk lean, 3-, 4-, 15-metre tests, "stand up from the chair", static balancing); disturbance of life was determined using Roland-Morris questionnaire, quality of life - EuroQol-5D questionnaire.
Results: It was demonstrated that the intensity of vertebral pain (pain at the time of investigation, the most common level of pain, pain in the best periods of the disease) is significantly worse in women with VF than corresponding parameters in persons without fractures. It was found that women with 2 and more VF have worse values of majority of measured FT (results of Schober test, lateral trunk lean, chest excursion, breath holding, hand grip strength, 15-metre test) in comparison with control group, while in women with 1 VF only results of Schober test and breath holding were significantly worse than same ones in control group. It was shown that for women with VF at the thoracic spine, results of breath holding