aged 70–79 years featured amyloidosis associated with hemodialysis (1 case), severe interstitial pneumonia,¹ Parkinson's disease,¹ total knee arthroplasty triggered by RA,² and mean RA duration was 17±11 years. Of 3 cases aged 80–89 years, RA onset was after age 80 years in two. At the time of fracture, 7 were receiving anti-osteoporosis treatment; 2 were on teriparatide, 4 on bisphosphonate, and 3 on activated vitamin D. Some patients discontinued anti-osteoporotic medication because of renal failure or side effects; 84% of patients had taken anti-osteoporotic medications prior to fracture. Seven patients were taking steroids (mean prednisolone dose 3.9±2.1 mg/day). Secondary fractures occurred in 2 cases; one had RA of the mutilated type with renal failure; a secondary fracture occurred 4 months later. The 2nd case was taking anti-osteoporotic medication but the secondary fracture occurred 32 months later. At 3 months after surgery, the walking abilities of all patients were the same as prior to fracture. No mortality was recorded at either 30 days or 1 year. No infective complication was noted.

Conclusions: Hip fracture in patients with RA occurs in 1.4% of the general population in Joetsu and Myoko, Japan, ranging from 0.93% in Taiwan² to 1.6% in Sweden³, and 1.6% of all RA patients, ranging 3.3% in Taiwan² to 6.5% in Sweden³. The mean age at hip fracture was 76±7.0 years, thus about 8 years younger than that of fracture patients from the general population, but was 72±4.5 years 10 years ago¹. Among all patients, 64% were on steroids (83% 10 years ago¹), 84% were on anti-osteoporosis drugs (31% 10 years ago¹) and the n/t ratio was 1.2 (3.2 10 years ago¹).

REFERENCES:

- [1] Arai K, et al. *Mod Rheumatol* 2007.
- [2] Lin YC, et al. *Osteoporos Int* 2015.
- [3] Yamamoto Y, et al. *J Rheumatol* 2015.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2657

THU0489 THE IMPACT OF CALCIUM INTAKE AND PHYSICAL EXERCISE ON PEAK BONE MINERAL DENSITY

L. Brites, M.L. Marques, A. Marques, A. Daniel, M. Santiago, J. Pereira da Silva. *Rheumatology, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal*

Background: Regular exercise and adequate nutrition are frequently prescribed as strategies to optimise peak bone mass and maintain bone and muscle health throughout life.

Objectives: The aim of our work was to determine the relationship of clinically assessed milk intake and physical exercise with bone mineral density (BMD) in young adults.

Methods: This cross-sectional study included members of the general population aged between 20 and 30 years from the Portuguese cohort SAOL (individuals aged 18+years randomly selected from a local county of Coimbra, Portugal). No exclusion criteria were applied. Individuals were asked to describe their milk intake (up to 2 glass/day and 2+glass/day, corresponding to up to and more than 480 mg/day), regular physical activity (categorised as none-to-moderate and at least intense physical activity) and strenuous sports practice (up to 2 hour/week and 2+hour/week) from the age of 10 to 25. They underwent a Dual-energy x-ray absorptiometry (DEXA) of the lumbar spine (LS) and proximal femur (PF). Categorical data is presented as proportions/percentages and continuous variable as median ± standard deviation. Differences between groups were assessed by Mann–Whitney U test. Potential predictors of a higher BMD of PF and LS were identified using multiple linear regression analysis. P-values<0.05 were considered statistically significant.

Results: We included 259 individuals (mean age of 24.7±2.7 years, 60.6% being female). The majority (82.6%), described having a moderate regular physical activity (equivalent to working as a mailman), practicing strenuous sports at least 2 hours per week (81.1%) and ingesting at least two glasses of milk per day (83.4%). The current BMD of the PF and LS were 0.8±0.13 and 0.99±0.11, respectively. On univariate analysis, the only significant association related the PF BMD and milk intake (p=0.008). Multiple linear regression analysis showed that while physical activity and sports practice did not predict BMD values, milk intake persisted as a predictor of a higher BMD of PF (p=0.022), even after including other explanatory variables. No statistically significant predictors were found for BMD of the LS.

Conclusions: Our study showed that clinically assessed milk intake between the ages of 10 and 25 years, but not physical exercise, is a significant predictor of higher bone mineral density assessed by DEXA at the PF. These results do not exclude a positive impact of exercise upon peak bone mass, but suggest that its retrospective evaluation in a clinical setting should not be taken as reassurance that a good peak bone mass was achieved in early adulthood.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4685

THU0490 TEMPORAL INCREASES IN SIDE EFFECT CONCERNS OF OSTEOPOROSIS MEDICATIONS AMONG WOMEN WITH PREVIOUS FRACTURES

M.I. Danila¹, E.J. Rahn¹, A.S. Mudano¹, R.C. Outman¹, P. Li¹, D.T. Redden¹, F. A. Anderson², S.L. Greenspan³, A.Z. LaCroix⁴, J.W. Nieves⁵, S.L. Silverman⁶, E. S. Siris⁷, N.B. Watts⁸, S. Ladores¹, K.M. Meneses¹, J.R. Curtis¹, K.G. Saag¹.

¹University of Alabama at Birmingham, Birmingham; ²University of Massachusetts Medical School, Worcester; ³University of Pittsburgh, Pittsburgh; ⁴Group Health Cooperative, Seattle; ⁵Helen Hayes Hospital, West Haverstraw; ⁶Cedars-Sinai Medical Center, Los Angeles; ⁷Columbia University Medical Center, New York; ⁸Mercy Health Osteoporosis and Bone Health Services, Cincinnati, USA

Background: High-consequence, albeit rare, adverse side effects of osteoporosis medication raise patients' risk perceptions and contribute to non-adherence. In the past decade, fears of osteonecrosis of the jaw (ONJ) and atypical femoral fractures (AFF) have been increasingly reported as barriers to both the initiation of and adherence to osteoporosis medications.

Objectives: To examine the temporal prevalence of self-reported concern about ONJ and AFF as reason for discontinuation of osteoporosis medication.

Methods: Activating Patients at Risk for Osteoporosis (APROPOS) enrolled US women from the Global Longitudinal Study of Osteoporosis (GLOW) with previous self-reported fractures and no current use of osteoporosis medication. Using mailed surveys in 2010 (T1), 2012 (T2) and 2013 (T3), women were asked whether they discontinued osteoporosis medication in the prior year because of concerns about ONJ at three time points (T1, T2, T3) and AFF at two time points (T2, T3). We calculated the proportion of women reporting fears of ONJ and AFF among those who discontinued osteoporosis medication, and compared the proportions using chi-square tests.

Results: A total of 833 women discontinued osteoporosis treatment at three time points, T1 (n=255), T2 (n=471), and T3 (n=107), respectively. There were no differences in the demographic characteristics between groups. The proportion of women reporting concerns of ONJ was 18.4% (T1), 26.7% (T2) and 64.5% (T3), while 23.5% (T2) and 60.7% (T3) reported fear of AFF as reason to discontinue osteoporosis treatment. These differences were statistically significant (p<0.0001) for all comparisons.

Conclusions: The proportion of women reporting concerns of ONJ and AFF increased over time among those women who discontinue osteoporosis medications. Strategies are needed to help patients balance risks and benefits given a significant and temporally growing concern of rare bisphosphonate side effects.

Disclosure of Interest: M. I. Danila: None declared, E. Rahn: None declared, A. Mudano: None declared, R. Outman: None declared, P. Li: None declared, D. Redden: None declared, F. Anderson Grant/research support from: Portola, Consultant for: Millennium Pharmaceuticals, S. Greenspan Grant/research support from: Amgen, Lilly, Consultant for: Merck, A. LaCroix Consultant for: Amgen, Pfizer, Sermonix, J. Nieves: None declared, S. Silverman Grant/research support from: Amgen, Lilly, Consultant for: Amgen, Speakers bureau: Amgen, Lilly, E. Siris Consultant for: Amgen, Radius, N. Watts Shareholder of: Osteodynamics, Grant/research support from: Shire, Consultant for: AbbVie, Amgen, Janssen, Merck, Radius, Sanofi, Paid instructor for: Amgen, Shire, S. Ladores: None declared, K. Meneses: None declared, J. Curtis Grant/research support from: Amgen, Consultant for: Amgen, K. Saag Grant/research support from: Amgen, Lilly, Merck, Consultant for: Amgen, Lilly, Merck

DOI: 10.1136/annrheumdis-2018-eular.4766

THU0491 FACTORS ASSOCIATED WITH ANNUAL PERCENTAGE CHANGES IN BONE MINERAL DENSITY: A-14 YEARS PROSPECTIVE POPULATION-BASED STUDY

M.L. Marques, L. Brites, A. Marques, A. Daniel, M. Santiago, J.A. Pereira da Silva. *Rheumatology department, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal*

Background: Gradual bone loss is expected with advancing age and gender differences were reported in the rate of annual loss of bone. Ideally, the decision to introduce interventions designed to prevent bone loss would be informed by reliable algorithms to identify fast bone losers. However, these are not readily available.

Objectives: In this analysis of 14 years prospective population-based data, we aim to identify predictors of the bone mineral density (BMD) loss in the perimenopausal and elderly population.

Methods: This study included members of the general population aged 40+years from the longitudinal cohort SAOL (individuals aged 18+years randomly selected from a local county of Coimbra, Portugal). The included individuals answered validated self-reported questionnaires at baseline (1997–2000) comprising questions on osteoporosis risk factors and medication use and underwent a Dual-energy x-ray absorptiometry (DXA) of the proximal femur (PF) and lumbar spine (LS). These procedures were repeated at follow-up (2011–2014). Demographic characteristics and DXA BMD details were descriptively summarised at baseline.