Results: No differences were seen on comparing the baseline parameters of the 3 groups. In comparison to the baseline, there was significant increase in the BMD in the 3 groups, Denosumab /Zol/Aln at both spine and hip (P = 0.02) at 5-, 3- and 5-years of treatment respectively. In the denosumab group, at 5-years of therapy, there was significant decrease in falls risk score (-1.4, 95% CI = –2.8 to –0.7; P = .01), significant improvements in the grip strength (+4.2Kg, P = 0.01), SPPB score (1.2 points; 95% CI = –0.07 to 2.2; P = .02), TUG (1.7 seconds; 95% CI = –2.2 to 0.1; P = .031) and gait speed (0.1 m/s; 95% CI = 0.03-0.2; P = .01). Zol and Aln improved significantly SPPB score (0.9 and 0.8 points; P = .04), TUG (1.4 and 1.3 seconds; P = .05) and gait speed (0.2 and 0.3 m/s; P = .02) respectively, however, there was no significant change in the falls risk (p = 0.06 and 0.07 respectively). 1-year after stopping Denosumab, there was significant worsening of the falls risk score, grip strength, SPPB score, TUG and gait speed (P = 0.1). There was no difference in all the measures 1-year after stopping Zol and Aln. There was no relation to the increase in BMD gained.

Conclusion: Denosumab displayed positive impact and significant improvements in physical performance, grip strength and gait speed. Also, Denosumab, enhanced multidirectional agility as depicted by TUG. Collectively, this would explain the reduction of falls risk which got worse on stopping the medication.

Osteoporosis and sarcopenia share similar risk factors, highlighting muscle-bone interactions, which may result in debilitating consequences, such as falls and fractures. RANK/RANKL/OPG pathway, a key regulator of bone homeostasis, may contribute also to the regulation of skeletal muscle integrity and function.

References:

[1] El Miedany et al. Falls Risk Assessment Score (FRAS). J Clin Gerontology and Geriatrics 2011; 21-26.

Acknowledgments: Ali El Miedany for his help in data entry

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.6521

Clinical symposium axSpA: Treat-to-target in axSpA: myth or reality?

OP0314 FACTORS ASSOCIATED WITH 5-YEAR DRUG-FREE REMISSION IN EARLY ONSET AXIAL SPONDYLOARTHRITIS PATIENTS: DATA FROM DESIR COHORT

A. Ruyssen-Witrand[1,2,3], V. Rousseau[1,2,3], A. Sommet[1,2,3], P. Goupille[4], Y. Degboe[1,3,5], A. Constantin[1,3,5]. *[1]CHU de Toulouse, Toulouse, France; [2]Inserm, UMR 1027, Toulouse, France; [3]Université Paul Sabatier Toulouse III, Toulouse, France; [4]University Hospital of Tours, Tours, France; [5]Inserm, UMR 1043, Toulouse, France*

Background: It is recommended to target remission when treating a patient with a chronic inflammatory rheumatism. To date, drug-free (DF) remission has been poorly investigated in axial Spondyloarthritis (axSpA).

Objectives: 1/To estimate the frequency of patients in DF remission after 5 years of follow-up in a cohort of early axSpA and 2/to assess the factors associated with 5-year DF Remission.

Methods: *Patients*: All patients included in DESIR (DEvenir des Spondyloarthrites Indifférenciées Récentes) cohort were selected for this analysis. *Definition of 5-year DF Remission*: 1/all patients in ASAS partial remission and/or ASDAS<1.3 at 5 year visit and 2/ taking no disease modifying anti-rheumatic drugs (DMARDs, including synthetic and biologics) only at 5-year visit (patients could have received DMARD before the 5-year visit) and 3/ with a NSAIDs score ≤ 25 at the 5-year visit. *Covariates analysed*: age, gender, smoking status, body mass index, disease classification criteria (ASAS, Amor, ESSG, New York), presentation at onset (peripheral or extra-articular features), disease activity at onset (BASDAI, ASDAS-CRP, CRP, MASES, TJC or SJC), functional impairment at baseline (BASFI, HAQ-AS, BASMI), comorbidities, baseline imaging data (radiographic sacroiliitis, mSASSS, MRI sacroiliitis, spine MRI Berlin score), NSAID intake within 6 months before baseline visit and 5-year treatment intake (including DMARDs, corticoids and NSAIDs). *Statistical analysis*: The associations between each of these clinical factors and the 5-year DF remission were tested by logistic regression. A multivariate model was built, stepwise procedure, to identify the independent variables associated with 5-year DF remission.

Results: Of the 708 patients included in DESIR cohort, 419 were seen at the 5-year visit and 72 (17.0%) were in DF remission (50% of males, aged of 33.08 years (SD:8.0), disease duration: 1.26 years (SD: 0.72), HLA-B27 in 71%, 26.4% had a MRI sacroiliitis). Patients in 5-year DF remission had lower symptom duration (1.3 year versus 1.6 year, p=0.01) had lower disease activity (BASDAI at baseline: 30.1 versus 46.1, p<0.0001, ASDAS-CRP: 1.96 versus 2.75, p<0.0001, CRP: 3.9 versus 8.6, p=0.01) had less peripheral involvement (at least 1 enthesitis at baseline: n=33 (45.8%) versus n=226 (65.1%), p=0.002; at least 1 painful joint at baseline: n=24 (33.3%) versus n=196 (56.5%), p=0.0006) less functional impairment (HAQ-AS: 0.32 versus 0.69, p< 0.0001, BASFI: 14.3 versus 32.1, p<0.0001, BASMI: 1.98 versus 2.51, p<0.0001), and had lower NSAIDs intake at baseline (NSAIDs score: 28.2 versus 48.1, p=0.0001). Interestingly, there was no difference in sacroiliac bone marrow oedema on MRI while Berlin scores on spine MRI were lower in patients in 5-year DF remission (Berlin score mean: 0.41 versus 1.24, p=0.03). During the 5 years of follow-up, patients in 5-year DF remission received less often analgesics (n=46 (63.9%) versus n=297 (85.3%), p<0.0001) and anti-TNF (n=1 (1.4%) versus n=182 (52.5%), p<0.0001), but there was no difference in NSAID or csDMARD intake between groups until the 4-year visit. After multivariate analysis, the variables that remained associated with 5-year DF remission were lower symptom duration (OR[95%CI]=0.58[0.36-0.88], p=0.01), lower baseline ASDAS-CRP (OR[95%CI]=0.50[0.32-0.76], p=0.002) or NSAIDs score (OR[95%CI]=0.54[0.34-0.81], p=0.004) and not initiating an anti-TNF during the 5 years of follow-up (OR[95%CI]=0.029[0.00-0.14], p=0.0005).

Conclusion: DF remission is rare, 5 years after onset of axSpA. Patients with longer symptom duration, higher baseline ASDAS-CRP and NSAIDs scores were less often in DF remission, while imaging and biological data did not predict DF remission.

Disclosure of Interests: Adeline Ruyssen-Witrand Grant/research support from: Abbvie, Pfizer, Consultant of: Abbvie, BMS, Lilly, Mylan, Novartis, Pfizer, Sandoz, Sanofi-Genzyme, Vanessa Rousseau: None declared, Agnès Sommet: None declared, Philippe Goupille Grant/research support from: AbbVie, Amgen, Biogen, BMS, Celgene, Chugai, Lilly, Janssen, Medac, MSD France, Nordic Pharma, Novartis, Pfizer, Sanofi and UCB, Consultant of: AbbVie, Amgen, Biogen, BMS, Celgene, Chugai, Lilly, Janssen, Medac, MSD France, Nordic Pharma, Novartis, Pfizer, Sanofi and UCB, Speakers bureau: AbbVie, Amgen, Biogen, BMS, Celgene, Chugai, Lilly, Janssen, Medac, MSD France, Nordic Pharma, Novartis, Pfizer, Sanofi and UCB, Yannick Degboe: None declared, Arnaud Constantin: None declared

DOI: 10.1136/annrheumdis-2020-eular.3222

OP0315 WHICH RESPONSE OR STATUS CRITERION DISCRIMINATES BEST IN AXSPA?

A. Ortolan[1,2], S. Ramiro[1,3], A. Sepriano[1], R. B. M. Landewé[4], D. Van der Heijde[1], V. Navarro-Compán[5]. *[1]Leiden University Medical Center, Leiden, Netherlands; [2]University of Padova, Padova, Italy; [3]Zuyderland Medical Center, Heerlen, Netherlands; [4]Amsterdam Rheumatology Center, Amsterdam, Netherlands; [5]University Hospital La Paz, Madrid, Spain*

Background: Response criteria and disease activity status used to assess treatment efficacy in axial spondyloarthritis (axSpA) are: the ASAS response criteria (ASAS20; 40; 5/6 and partial remission - PR), BASDAI50 and ASDAS-based criteria (clinically important/major improvement –CII/MI; low disease activity/inactive disease –LDA/ID). These outcomes are variably used in RCTs testing biological (b) and targeted-synthetic (ts)DMARDs. However, it remains unknown which are the most discriminative.

Objectives: To compare the ability of different criteria to discriminate between the response to active treatment and placebo in axSpA.

Methods: A systematic literature review was performed in Medline and Embase to identify RCTs of b- and tsDMARDs. Placebo-controlled RCTs meeting the primary endpoint were included provided they reported ≥2 response/status criteria. Outcomes were collected at the timepoint of primary endpoint assessment (PEA). Risk of bias was evaluated by The Cochrane tool. Meta-analysis with the Mantel-Haenszel method was conducted to calculate the Chi-square ($\mathbf{X}^2$) between percentages of patients fulfilling each criterion in the treatment arm versus the placebo arm (higher $\mathbf{X}^2$, better discrimination). Comparisons among criteria were conducted evaluating their performances across RCTs reporting the exact same outcomes at the PEA. Different sets of RCTs were used for the comparisons depending on the available outcomes (Table).

Results: 29 RCTs fulfilled inclusion criteria. In total, 23/29 RCTs with PEA at 12, 14 or 16 weeks, all at a low risk of bias, could be considered for meta-analysis. Other 6 RCTs had later (e.g 24 weeks) or earlier (e.g. 6 weeks) PEA. Out of the 23 RCTs, only 16 reported at least a minimum set of ASAS20,-40, -PR and BASDAI50 (Table, Set 1): discriminative performances for ASAS40 were >ASAS20>BASDAI50>ASAS-PR. In 11/16 RCTs ASAS5/6 was also included (Table, Set 2): this criterion showed the best performances among ASAS-based response criteria. 8/16 RCTs additionally included some ASDAS-based criteria (Table, Set 3): ASDAS-CII and -MI showed a much higher discrimination compared to the ASAS-based criteria. In only 3 trials could all criteria be compared, with the ASDAS-CII and -MI appearing as the most discriminative criteria, followed by ASAS 5/6 (Table, Set 4).