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moderate/high activity patients categorized by DAS28-CRP. The results showed that 1639 (29.9%) remission/low activity patients and 4948 (28.3%) moderate/high activity patients received csDMARD monotherapy, while more combination therapies were prescribed in both groups (57.2% vs 55.1%, respectively). Furthermore, 337 (6.2%) patients received biologic disease-modifying antirheumatic drugs (bDMARDs) in remission/low activity group, while 1021 (5.9%) patients received bDMARDs in moderate/high activity group. In terms of tsDMARDs (only tofacitinib was approved in China), the proportions of susage were lower for remission/low activity patients (0.2%) than for the moderate/high activity patients (0.3%). On the other hand, the proportion of glucocorticoids usage in remission/low activity patients (15.5%) was lower than in moderate/ high activity patients (21.3%).

Conclusion: Over three-quarters of RA patients registered in CREDIT were in moderate/high disease activity. csDMARDs are the most frequently used medications for RA in China.

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## SAT0619

## ATTITUDES AND PERCEPTIONS OF PHYSICAL ACTIVITY IN PATIENTS WITH SPONDYLOARTHRITIS: A SYSTEMATIC REVIEW

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Background: Patients with arthritis are less likely to adhere to physical activity recommendations than are individuals in the general population. In contrast to rheumatoid arthritis (RA), which affects predominantly peripheral joints, axial spondyloarthritis (axSpA) affects predominantly the axial skeleton and may result in restricted spinal mobility. Both RA and axSpA are associated with an increased risk of cardiovascular disease, the development of physical disability, and decreased levels of physical activity. However, the extent to which the distinct joint distributions in these forms of inflammatory arthritis might differentially affect physical activity behaviors is not known. Several studies have addressed the relationship between "physical activity behavior" and "disease-specific outcomes" among patients with RA, but information about this among patients with axSpA is more limited.

**Objectives:** To review systematically and synthesize qualitatively the literature about perceived facilitators and barriers to physical activity in patients with axSpA and identify the types of physical activity preferred by these patients.

Methods: PubMed and Scopus and reference lists were searched for quantitative and qualitative studies reporting on beliefs towards exercise in patients with axSpA. Searches were limited to studies published from 2000 through 2018. The PRISMA guidelines were followed. Systematic searches identified 125 publications which underwent a title, abstract, or full-text review. Studies were excluded if articles were not in English or did not include original data. We summarized the methodologic quality using modified criteria for quantitative and qualitative studies.

Results: Eight quantitative and three qualitative studies met eligibility criteria, with variable study quality. Based on self-reported data, 50% to 68% met established physical activity recommendations with walking, swimming/pool exercise, and cycling the most common forms reported. Intrinsic factors such as motivation and improvement in symptoms and health were commonly reported as facilitators associated with physical activity/exercise. Barriers included lack of time, fatigue, and symptoms such as pain.

Conclusion: Up to half of patients with axSpA do not meet established physical activity recommendations. Given the potential for regular physical activity to reduce symptom burden in this patient population and the recent 2018 EULAR recommendations for regular physical activity as part of the management of these patients, more rigorous studies of physical activity behaviors and attitudes will be useful to inform interventions and promote exercise among individuals with axSpA.

## **REFERENCES**

[1] Ehrlich-Jones L, Lee J, Semanik P, Cox C, Dunlop D, Chang RW. Relationship between beliefs, motivation, and worries about physical activity

- and physical activity participation in persons with rheumatoid arthritis. Arthritis Care Res 2011;63:1700–1705.
- [2] Iversen MD, Frits M, von Heideken J, Cui J, Weinblatt M, Shadick NA. Physical activity and correlates of physical activity participation over three years in adults with rheumatoid arthritis. Arthritis Care Res 2017;69:1535-1545.

[3]

[4] Rausch Osthoff A-K, Niedermann K, Braun J, Adams J, Brodin N, Dagfinrud H, et al. 2018 EULAR recommendations for physical activity in people with inflammatory arthritis and osteoarthritis. Ann Rheum Dis 2018:annrheumdis-2018-213585. Available at: http://ard.bmj.com/lookup/doi/10.1136/annrheumdis-2018-213585.

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SAT0620

## INCIDENCE AND TREND OF HIP FRACTURE IN SPAIN. FACTORS ASSOCIATED WITH THE VARIABILITY ORSERVED.

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**Background:** It is known that in Spain there is a great variability between Autonomous Communities (CCAA) in the incidence and trend of hip fracture, with rates in certain regions that can double those of others. Although it is speculated with different hypotheses that explain it, there are no studies that demonstrate the reasons for this variability.

**Objectives:** 1.- To analyze the incidence and trend of hospital admissions for hip fracture, in Spain, during the period between 1999 and 2015.

2.- Analyze factors/risk markers (genetic, demographic, level and living conditions, health indicators, cohort effect centered on the period of the civil war, climatology and environment) that could explain the variability in incidence and trend between different CCAA.

**Methods: Part 1:** retrospective observational study, nationwide, based on the exploitation of an administrative database (MBDS) that collects hospital admissions from 1/1/1999 to 12/31/2015. Hip fractures were identified through the presence of ICD-9 820.0 to 820.9 as primary or secondary diagnosis. Only those that the patient was 50 or older were selected. The crude rates and adjusted for age of incidence of hip fracture were calculated, by sex, age groups and by CCAA. The population census issued by the National Institute of Statistics (INE) was used to calculate this rate. The trend over the 17 years covered in the study was analyzed using Poisson regression and negative binomial models.

Part 2: ecological study, based on the analysis of the results obtained in part 1, with different risk markers obtained from the INE (except the 4), by CCAA. The analyzed factors were: 1.- Genetic; 2.- Demographic; 3.-Level and conditions of life; 4.- Health; 5. Impact of the civil war. 6.-Environment; 7.- Climatological. This analysis was performed using bivariate correlations and univariate and multivariate linear regression.

Results: There were 744,848 patients diagnosed with hip fracture; 182,205 (24.4%) men and 562,643 (75.5%) women p <0.001. (Ratio M: V of 3.07). The mean age was 81.7 years (SD 8.9), 79.3 years (SD 10.3) in men and 82.5 years (SD 8.2) (p <0.001). In-hospital mortality was 5.7%, The average of the Charlson Index was 0.71 (SD1.14). The rate adjusted for the age of incidence of global hip fracture at the national level was 315.38/100,000 inhabitants \* year (95% CI 312.36-317.45), 169.56 (95% CI 166.26-172.39).) in men and 434.89 (95% CI 430.66-438.17) in women. By CCAA the incidence of hip fx varied from 213,97 in the Canary Islands to 363,13 in Comunidad Valenciana and Cataluña).

The trend for both sexes was -0.67% (95% CI 0.9990-0.9957) (p <0.001); in men it was -0.06% (95% CI 0.9975-1.0013) (p = 0.537) and