Conclusion: Although obesity was more frequently reported in RA and PsA patients, age and gender seemed to be the major factors in the occurrence of this difference rather than inflammatory arthritis subgroups. Therefore, when considering obesity as a factor in the registries, for instance biological registries, sex and age should be kept in mind.

REFERENCES:

- [1] Højgaard, P., et al., The influence of obesity on response to tumour necrosis factor- α inhibitors in psoriatic arthritis: results from the DANBIO and ICEBIO registries. *Rheumatology* (Oxford), 2016. **55**(12): p. 2191-2199.
- [2] Liu, Y., et al., Impact of Obesity on Remission and Disease Activity in Rheumatoid Arthritis: A Systematic Review and Meta-Analysis. *Arthritis Care Res (Hoboken)*, 2017. **69**(2): p. 157-165.
- [3] Moroni, L., N. Farina, and L. Dagna, *Obesity and its role in the management of rheumatoid and psoriatic arthritis*. *Clin Rheumatol*, 2020. **39**(4): p. 1039-1047.
- [4] Zurita Prada, P.A., et al., Influence of smoking and obesity on treatment response in patients with axial spondyloarthritis: a systematic literature review. *Clin Rheumatol*, 2020.

Figure 1. BMI regarding to sex and diseases subtypes

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POS0569 LONG-TERM OUTCOMES OF CHILDREN BORN TO WOMEN WITH RHEUMATOID ARTHRITIS

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Background: Children born to women with rheumatoid arthritis (RA) have increased incidences of adverse neonatal outcomes and a potential excess risk of specific diseases during childhood and adolescence [1]. Further studies aimed at confirming long-term consequences in the offspring are needed.

Objectives: To evaluate whether maternal RA has an impact on the health and developmental outcomes of the offspring.

Methods: A retrospective descriptive study was conducted on data regarding 43 children born to mothers diagnosed with either RA or juvenile idiopathic arthritis (JIA) prior to conception. Participants were recruited from several Clinics of Rheumatology located across Romania. Data on neonatal outcomes, lactation, developmental milestones, childhood illnesses, and hospitalizations was collected using a patient-reported questionnaire completed by maternal participants in 2020.

Results: Favorable neonatal outcomes were found in 81% of the participants; however, children of mothers with RA had a higher occurrence of favorable outcomes than those with JIA ($p = 0.009$). Adverse neonatal outcomes reported

include the following: small for gestational age (11.6%), intrauterine growth restriction (4.65%), and preterm births (2.75%). There were no incidences of congenital malformations. The mean birth weights of offspring born to mothers with RA are higher than those with JIA ($p = 0.00829$).

While the majority of the children were breastfed (88.4%), those who were not breastfed were hospitalized more often than those who were breastfed for any period of time ($p = 0.03$). Mothers who experienced a postpartum flare up within the first 4 months breastfed their children significantly less than those who did not have a flare up (14.62 versus 48 weeks, $p = 0.00011$).

The mean age of the children at inclusion was 7.6 ± 5.5 years.

Developmental milestones were considered to be within the expected average limits, except for an increased incidence of delayed speech (12%).

51.2% of the children were hospitalized at some point during their childhood, with viral enterocolitis, tonsillitis, bronchiolitis, and pneumonia being the most frequently encountered reasons for admission. Surprisingly, children with favorable neonatal outcomes were hospitalized more often than those with unfavorable outcomes ($p = 0.0000436$). Additionally, children born to mothers under the age of 35 were hospitalized more often than those over 35 ($p = 0.02$).

77.3% of offspring experienced recurrent ear/nose/throat (ENT) infections, 55.8% had allergies, and 39.5% were diagnosed with atopic dermatitis. Childhood allergies were strongly associated with an increased incidence of atopic dermatitis ($p = 0.0000585$), as was a concurrent maternal thrombophilia diagnosis ($p = 0.03$). Of the remaining childhood afflictions that were assessed asthma/chronic respiratory diseases (4.65%), juvenile idiopathic arthritis (2.33%), ulcerative colitis (2.33%), diabetes, anxiety/personality disorders, thyroid diseases, febrile seizures, and epilepsy did not yield statistically significant results.

Conclusion: Maternal RA was found to be associated with increased incidences of adverse neonatal outcomes, childhood hospitalizations, recurrent ENT infections, allergies, and atopic dermatitis. However, overall health outcomes of offspring did not show alarmingly significant excess morbidities.

REFERENCES:

- [1] Rom AL, Wu CS, Olsen J, et al. Parental rheumatoid arthritis and long-term child morbidity: a nationwide cohort study. *Annals of the Rheumatic Diseases*. 2016;75(10):1831–1837. doi:10.1136/annrheumdis-2015-208072

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POS0570 ASSOCIATION OF BODY FAT MASS AND ITS DISTRIBUTION WITH DISEASE ACTIVITY, PAIN AND DISABILITY IN RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) and body composition are closely related. Recent studies have found a significant association between fat mass and disease activity and disability in RA [1].

Objectives: We aimed to study the association between body fat mass and its distribution with disease activity, disability, and pain in RA patients.

Methods: This is a cross-sectional study of patients with RA diagnosis according to ACR-EULAR 2010 classification recruited from first January 2021. Those with prior cancer, hyperparathyroidism, hyperthyroidism, diabetes, chronic kidney disease, and cirrhosis were excluded. Body fat mass (BFM) and its distribution (gynoid (GFM), android (AFM), visceral (VFM), limbs (LFM), trunk (TFM)) were measured with dual-energy X-ray absorptiometry (Hologic, Horizon QDR®). Clinical data and laboratory tests of the same day of the DXA scan were analyzed. The associations between BFM and its distribution with disease activity score (DAS28CRP), pain visual analogue scale (VAS), and disability measured by health assessment questionnaire (HAQ) were explored. Obesity was defined as a body mass index (BMI) $\geq 25\text{kg/m}^2$. Our statistical analysis was based on descriptive study, comparisons and linear regressions using SPSS 20.

Results: It is about 69 RA patients. Their mean age was 49.86 ± 14.33 years, mean DAS28CRP was 2.56 ± 1.27 , and mean disease duration was 14.84 ± 10.99 years. Sixty-two (89.9%) were women. The mean BMI was $26.46 \pm 5.26\text{kg/m}^2$, and 41 patients were obese (59.4%). Compared with non-obese patients, obese patients had a higher C-reactive protein ($p = 0.03$). DAS-28CRP was higher in obese patients (2.77 ± 1.41 vs 2.25 ± 0.97) but did not reach significance ($p = 0.07$). We did not find any difference between the two groups regarding pain and disability. In univariate regression analysis, the LFM was positively associated with disease activity ($p = 0.001$; $\beta = 0.38$), pain ($p = 0.001$; $\beta = 0.38$) and disability ($p = 0.007$; $\beta = 0.32$). Adjusted on BMI, LDL cholesterol, triglyceride, cumulative dose of corticosteroid, disease and corticosteroid duration, menopause duration, dose and duration of methotrexate, we found a significant association between LFM, disability ($p = 0.02$; $\beta = 0.51$), disease activity ($p = 0.02$; $\beta = 0.54$) and pain ($p = 0.009$; $\beta = 0.57$). However, we had no association between disease activity, pain, and disability with BFM and the other components.

Conclusion: Limbs fat mass was significantly associated with the activity, disability, and pain in RA patients.