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Background: Hyperuricemia has been reported to be significantly associated with risk of obesity. However, previous studies on the association between serum uric acid (SUA) and body mass index (BMI) yielded conflicting results.

Objectives: The present study examined the relationship between SUA and obesity among Chinese adults.

Methods: Data were collected at Guangdong Second Provincial General Hospital in Guangzhou City, China between January 2010 and December 2018. Participants with ≥ 2 medical checkup times were included in our analyses. Logistic regression model (LRM) was performed for data at baseline. For all participants, generalized estimation equation (GEE) model was used to assess the association between SUA and obesity, where the data were repeatedly measured over the nine-year study period. We calculated the cut-off values for SUA of obesity using the receiver operating characteristic curves (ROC) technique.

Results: A total of 15,959 participants (10,023 males and 5,936 females) were included in this study, with an average age of 37.38 years (SD: 13.27) and average SUA of 367.05 $\mu\text{mol/L}$ (SD: 97.97) at baseline, respectively. Finally, 1078 participants developed obesity over the 9-year period. The prevalence of obesity was approximately 14.2% for high SUA level. In logistic regression analysis at baseline, we observed a positive association between SUA and risk of obesity: OR=1.84 (95% CI: 1.77,1.90) for per-SD increase in SUA. Considering repeated measures over 9-year for all participants in the GEE model, the per-SD OR was 1.85 (95% CI: 1.77,1.91) for SUA and the increased risk of obesity were greater for male (OR=1.45) and elderly participants (OR=1.01). The SUA cutoff points for risk of obesity using ROC curves were approximately consistent with the international standard.

Conclusion: Our study observed higher SUA level was associated with increased risk of obesity. More high-quality research is needed to further support these findings.

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Figure 1. Location of Guangdong Second Provincial General Hospital (Guangzhou, Guangdong, China) and the prevalence of obesity by different years stratified by baseline SUA.

Disclosure of Interests: None declared

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POS1422

CORRELATES OF TESTING POSITIVE FOR SARS-COV-2 IN PATIENTS WITH RHEUMATIC AND MUSCULOSKELETAL DISEASES

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Background: Many studies on COVID-19 outcomes in patients with RMD have either restricted to COVID positive RMD patients or compared them to the general clinic population as a comparator. Given heterogeneity in behaviors and risks, clinical characteristics associated with a positive diagnosis among patients with RMD seeking testing for Sars-CoV-2 remain less well studied.

Objectives: Among patients with RMD receiving a Sars-CoV-2 PCR test, we aimed to identify RMD-related factors associated with a positive test result.

Methods: Among patients seen at least once in the University of Washington (UW) rheumatology clinics between March 2018 to March 2020, we reviewed electronic medical records to identify patients undergoing Sars-CoV-2 PCR testing from March 1 through October 31, 2020. Patients with RMD were categorized into two groups: those who tested positive for Sars-CoV-2 and those who tested negative. We randomly selected patients from the negative group in a 2:1 ratio for further data abstraction. Student's *t*-test and Chi-squared tests were used to compare continuous and categorical variables, respectively, between the groups. To determine the correlates of testing positive for Sars-CoV-2, specifically RMD medication use and disease activity, we constructed different multivariable logistic regression models adjusted for age, sex, race/ethnicity, presence of comorbidities, body mass index, and smoking.

Results: A total of 2768 RMD patients underwent SARS-CoV-2 PCR testing within the UW system, of whom 43 (1.5%) were positive at least once. Three patients with incomplete information were excluded. Patients who tested positive had higher prevalence of end stage renal disease (ESRD)/chronic kidney disease (CKD) (24% versus 11%), had higher rates of active disease (24% versus 20%), were older (>55 years) (mean age 57.3 versus 54.8 years), male (63% versus 55%), non-white race/ethnicity (32% versus 26%), and higher prevalence of multiple comorbidities (42% versus 31%) (Table 1). In the multivariable models, neither RMD medication use (versus no use, Table 1) nor high disease activity (vs low disease activity/remission) were statistically significantly associated with COVID-19 positivity. Among the 41 COVID-19 positive patients, a majority recovered without specific treatments, although approximately one third of the positive patients were hospitalized and three deaths were observed.

Conclusion: In this study, patients who tested positive did not differ in many ways from those who tested negative.

Table 1. Baseline characteristics of the patients prior to COVID testing

Variables	All (N=126)	COVID Positive (N=41)	COVID Negative (N=85)	P value
Age in years – mean (SD)	55.6 (15.3)	57.3 (16.3)	54.8 (14.9)	0.40
Sex				0.39
Male	73 (57.9)	26 (63.4)	47 (55.3)	
Female	53 (42.1)	15 (36.6)	38 (44.7)	
Race				0.39
White	89 (71.2)	26 (63.4)	63 (74.1)	
Other race	35 (28.2)	13 (31.7)	22 (25.9)	
Missing	2 (1.6)	2 (4.9)	0 (0.0)	
Rheumatic disease				0.64
OA/Crystal/Fibromyalgia	37 (29.4)	11 (26.8)	26 (30.6)	
RA/SpA	32 (25.4)	9 (22.0)	23 (27.1)	
All others	57 (45.2)	21 (51.2)	36 (42.3)	
Rheumatic disease activity				0.57
Active	27 (21.4)	10 (24.4)	17 (20.0)	
Not active	99 (78.6)	31 (75.6)	68 (80.0)	
Co-morbidities				
Diabetes mellitus (%)	25 (19.8)	9 (22.0)	16 (18.8)	0.68
Hypertension	48 (38.1)	20 (48.8)	28 (32.9)	0.09
Cardiovascular disease	23 (18.3)	9 (22.0)	14 (16.5)	0.46
Lung disease	25 (19.8)	10 (24.4)	15 (17.7)	0.37
Cancer	10 (7.9)	3 (7.3)	7 (8.2)	0.86
ESRD/CKD	19 (15.1)	10 (24.4)	9 (10.6)	0.04*

BMI: Body mass index; SD: Standard deviation; OA: Osteoarthritis; Crystal: Crystalline diseases; RA: Rheumatoid arthritis; SpA: Spondyloarthritis

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POS1423

LIFESTYLE HABITS IN PATIENTS WITH RHEUMATOID ARTHRITIS – A CROSS SECTIONAL STUDY ON TWO SCANDINAVIAN COHORTS

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