of SpA because signs of inflammatory changes in the sacroiliac joint are a common finding in MRIs of low back pain patients.

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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.1504

SAT0683 A NORTH-SOUTH WORLDWIDE GRADIENT IN SYSTEMIC ACTIVITY OF PRIMARY SJÖGREN SYNDROME: INCREASED SEVERE DISEASE IN PATIENTS FROM SOUTHERN COUNTRIES

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Objectives: To analyse the influence of geolocation on the clinical systemic presentation of primary Sjögren syndrome (SjS) at diagnosis.
Methods: The Big Data Sjögren Project Consortium is an international, multicentre registry created in 2014. Centres were classified by continent, with an additional north-south sub-classification according to latitude (>or<50'N in Europe, equator >or <in America and>or<30'N in Asia). Systemic involvement at diagnosis was retrospectively scored using the ESSDAI.
Results: The highest baseline ESSDAI scores were reported from Southern vs Northern countries in Europe (7.2 vs 4.6, p<0.001), America (5.3 vs 3.5, p<0.001) and Asia (6.3 vs 3.9, p<0.001). In Europe, the frequency of activity in each domain was higher in Southern countries (in all domains except constitutional, p<0.001). In America, Southern countries had the highest frequencies of active patients in constitutional, articular, cutaneous, pulmonary, PNS and CNS domains (p<0.001 in all) and the lowest frequencies in lymphadenopathy (p=0.018) and biological (p<0.001) domains. In Asia, patients from China had the highest frequency of activity in glandular, articular, pulmonary, muscular, haematological and biological and those from India in lymphadenopathy, cutaneous, renal and PNS.
Conclusions: This study provides the first evidence for a strong influence of geolocation on the systemic phenotype of primary SjS at diagnosis. Geographical determinants should be considered as key variables when systemic disease is scored.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.6446

SAT0684 APPENDICITIS AND THE RISK OF NEWLY DIAGNOSED SYSTEMIC SCLEROSIS: A NATIONWIDE, POPULATION-BASED, CASE-CONTROL STUDY IN TAIWAN

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Background: Previous studies suggested that patients with systemic sclerosis (SSc) had specific alterations in the gastrointestinal microbiota, including increased levels of pathobiont genera, such as Fusobacterium. Local expansion of Fusobacterium was also found in children with acute appendicitis. However, no prior study had explored the association between incident SSc and prior appendicitis.
Objectives: To explore the association between appendicitis and the risk of incident systemic sclerosis (SSc).
Methods: Using the 2003–2012 claims data of the entire population in Taiwan, we identified 1595 patients with a new diagnosis SSc (ICD-9-CM 710.1) validated by a thorough review of the original medical record from 2006 to 2012 as SSc cases. We also selected 15 950 individuals who never had a diagnosis of SSc during 2003–2012 matching SSc cases (1:10) for age, sex, and the year of index date from claims data of a one million representative Taiwanese population as non-SSc controls. The index date was defined the first date of SSc diagnosis in the SSc group and the first date of ambulatory visit for any reason in the control group. Using conditional logistic regression analysis, The association between appendicitis (ICD-9-CM 540–543) and the risk of incident SSc was tested by estimating odds ratios (ORs) with 95% confidence intervals (CIs) controlling for potential confounders, including Charlson comorbidity index, a history of periodontal disease (ICD-9-CM 523), salmonella infection (ICD-9-CM 003), and intestinal infection (ICD-9-CM 009). We also performed sensitivity analyses by varying the definition of appendicitis according to the status of receiving primary appendectomy.
Results: The mean ±SD age was 51±15 years in both cases and controls. The proportion of women was 77.5%. Appendicitis was identified in 17 (1.1%) of 1595 SSc cases and 81 (0.5%) of 15 950 non-SSc controls before the index date had a history of appendicitis. A significant association between appendicitis and the risk of SSc was demonstrated (OR, 2.03; 95% CI, 1.14–3.60) after adjustment for potential confounders. The association between appendicitis and SSc risk was still statistically significant using various definitions of tonsillitis based on the status of primary appendectomy.

	Univariate	Multivariate
	OR (95% CI)	OR (95% CI)
Appendicitis	2.11 (1.25–3.57)	2.03 (1.14–3.60)
Primary appendectomy	2.04 (1.17–3.57)	1.93 (1.06–3.54)
Appendicitis with primary appendectomy	2.07 (1.18–3.62)	1.97 (1.07–3.61)
Appendicitis or primary appendectomy	2.09 (1.23–3.53)	1.99 (1.13–3.53)

Conclusions: The present study reveals an association between SSc risk and a history of appendicitis.

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Acknowledgements: The authors would like to thank the Biostatistics Task Force of Taichung Veterans General Hospital, Taichung, Taiwan, ROC for statistical support.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.1119