joint destruction and skeletal abnormalities which the entity is clinically referred as ochronotic arthropathy (OA) [1].

Objectives: To assess clinical, demographic features and radiographic findings in patients with OA.

Methods: Adult AKU patients registered in the database were included in the study. All patients investigated for the presence of OA and inflammatory symptoms. Patients with musculoskeletal symptoms (MSK) underwent conventional X-rays and routine laboratory evaluation. In cases suggestive of inflammatory disease additional work-up such as autoantibodies, HLA-B27 and MRI with inflammatory protocol were performed.

Results: Six out of 15 patients had symptoms compatible with OA (40%; 4 male [M], 2 female [F], median age 56 [51-62] years). The median duration of MSK symptoms were 7 (2-19) years. None of the patients had family history of rheumatologic disease. Baseline CRP were normal in all patients. The HLA-B27 test was negative in all cases. One patient had high titers of rheumatoid factor along with positive anti-CCP that were accompanying erosive arthritis on MCP joints by X-rays. Two patient had positive ANA. All patients had chronic back pain and had changes compatible with OA in their spines (narrowing of the intervertebral spaces, vacuum phenomenon and intervertebral disc calcification). Two patient had inflammatory type of pain character (IBP). Radiographic sacroiliitis according to modified New York criteria was present in 2 cases. Inflammatory spine and SIJ lesions were detected by MRI in 1 patient. Extra-articular involvement including enthesitis (1 patient), interstitial lung disease (1 patient) and scleritis (1 patient) was also noted. The clinical and demographic characteristics of the OA are given in Table 1.

Conclusion: There was a high prevalence of inflammatory arthritis (2 axSpA; 1 RA) in OA (50%) which contradicts with the common concept that OA is a degenerative disorder. According to our results, inflammatory disease should be carefully screened in OA patients as accumulated metabolic products may trigger inflammatory pathways.

Table-1						
	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
Age (yr), Sex	55, F	56, M	51, M	56, M	59, F	62, M
Symptom duration/year	7	19	17	6	2	7
Structural changes documented by X-rays						
Cervical	+	+	+	+	+	+
Dorsal	+	+	+	+	+	+
Lumbar	+	+	+	+	+	+
SIJ (Right/Left)	2/3	0/1	2/3	1/1	1/1	0/0
Shoulder	-	+	+	+	+	+
Hip	-	+	+	+	-	+
Knee	+	+	-	-	-	+
Wrist	+	-	-	-	-	-
Total joint replacement	Bilateral knee	-	-	Right hip	-	Bilateral hip
Inflammatory manifestations	IBP, inflammatory SIJ and spine lesions by MRI	IBP, Scleritis, enthesitis, structural changes in SIJs by MRI	ILD, erosive arthritis, SIJ MRI was suggestive of crystal deposition	-	-	-
Laboratory findings			ANA, RF, CCP positivity		ANA, RF positivity	

REFERENCES

- Phornphutkul, C., et al., *Natural history of alkaptonuria*. New England journal of medicine, 2002. 347(26): p. 2111-2121.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.4956

AB0885

THE RELATIONSHIP BETWEEN METABOLIC SYNDROME SEVERITY AND THE RISK OF MORTALITY IN GOUT PATIENTS: A POPULATION-BASED STUDY

Naomi Schlesinger, Mohamed Elsaid, Vinod Rustgi. *Rutgers Robert Wood Johnson Medical School, Medicine, New Brunswick, United States of America*

Background: Metabolic syndrome (MetS) is common amongst gout patients. The MetS is diagnosed when a patient has at least 3 of the following 5 conditions of hyperglycemia, hypertension, hypertriglyceridemia, low high-density lipoprotein (HDL) cholesterol or abdominal obesity.

Little is known about the relationship between the cumulative effects of all five metabolic syndrome conditions and the risk of mortality among adult patients with gout. Metabolic Syndrome Severity Score (MetSSS) is a new clinical prediction score that employs available components (sex, age, race, systolic blood pressure, waistline circumference, high-density lipoprotein, triglycerides and fasting blood glucose). MetSSS is a validated summary score that accounts for

the combined effects of all 5 metabolic features. MetSSS allows examination of associations between MetS severity and the risk of mortality.

Objectives: to use the MetSSS to examine the overall associations between MetS severity and the risk of mortality related to all-causes, cardiovascular disease and diabetes amongst United States (US) gout patients.

Methods: Mortality-linked data for 12,101 adults aged 18 to 90 years who participated in the Third National Health and Nutrition Examination Survey (NHANES) III (1988-1994) was analyzed. Data from NHANES III were linked to national mortality records for all participants up to time of death or end of study (i.e. 23 years following initial recruitment). All 5 metabolic features were used to calculate gender-race/ethnicity specific MetSSS Z-scores in gout patients. The Z-score is the number of standard deviations from the mean a data point is and allows a continuous representation of all MetS conditions while accounting for gender-race/ethnicity disparities.

Results: A total of 3,381 deaths were observed, of whom 215 had gout. The prevalence of gout amongst adults was 2.59% (95% CI; 2.13%-3.05%). Moderate to high MetS severity was significantly prevalent among gout patients (47.33% vs. 21.16% no gout; P-value <0.0001). The mean MetSSS Z-score for gout patients was significantly higher than those without gout (0.71 vs. -0.04 no gout; P-value <0.0001). For gout patients, a one-unit increase in MetSSS score was associated with a significant increase in the risk of all-cause mortality Adjusted Hazard Ratio (aHR) 1.46 (95% CI; 1.13, 1.87).

In a disease-specific survival model, a one-unit increase in MetSSS score was associated with a aHR 1.62 (95% CI; 1.21, 2.15) increase in heart disease related mortality among gout patients. Amongst those with gout, a one-unit increase in MetSSS score was associated with increased risks of diabetes- and hypertension- related mortalities aHR 2.53 (95% CI; 1.43, 4.62), aHR 1.73 (95% CI; 1.07, 2.79), respectively.

Conclusion: The Z score calculation in our study allowed a quantification of increased diabetes- and hypertension- related mortalities, all- cause and cardiovascular mortality in patients with gout.

Use of the MetSSS can provide an opportunity to identify patients at highest risk influencing patients to change their lifestyle and better comply with treatment.

REFERENCES

- Wiley JF, Carrington MJ. A metabolic syndrome severity score: A tool to quantify cardio-metabolic risk factors. *Prev Med* 2016;88:189-195.
- Thottam GE, Krasnokutsky S, Pillinger MH. Gout and metabolic syndrome: a tangled web. *Curr Rheumatol Rep* 2017;19:60.

Disclosure of Interests: Naomi Schlesinger Grant/research support from: Pfizer, Consultant for: YesNovartis, Horizon Pharma, Proteo Thera, Selecta Biosciences, Olatec, IFM Therapeutics, Mallinckrodt Pharmaceuticals, Mohamed Elsaid: None declared, Vinod Rustgi Grant/research support from: Genfit, Consultant for: yes Allergan, Zydus, Abbvie

DOI: 10.1136/annrheumdis-2019-eular.664

AB0886

IS THE SENSE OF SMELL IMPAIRED IN GOUT PATIENTS?

Naomi Schlesinger¹, Mariam Alikhan¹, Richard Doty². ¹Rutgers Robert Wood Johnson Medical School, New Brunswick, United States of America; ²Perelman School of Medicine, University of Pennsylvania, Department of Otorhinolaryngology, Philadelphia, United States of America

Background: The sense of smell is sensitive to hundreds of thousands of odors. Smell disorders significantly compromise the quality of life. A National Health and Nutrition Examination Survey (NHANES) 2013-2014 survey among US population aged 40 years of age and older years found smell dysfunction in ~ 20.5 million (13.5%) of Americans (1). Prevalence increased with age. Other factors influencing the sense of smell include ethnicity, smoking, medications, head trauma, chronic sinusitis, upper respiratory tract infections, alcoholism and neurological disorders. The University of Pennsylvania Smell Identification Test (UPSIT) (2) is a well-validated test of olfactory function that correlates with odor detection and other quantitative measures of olfaction. This test has become the 'gold standard' for olfactory testing and is comprised of four test booklets, each containing 10 microencapsulated (scratch & sniff) odors.

Patients with gout, the most common inflammatory arthritis, frequently have multiple associated comorbidities, affecting many organs and aspects of one's health.