Objectives: To determine whether gout patients have an impaired sense of smell.

Methods: This was a cross-sectional prospective study of gout patients seen in our rheumatology clinic. The first 30 clinic patients were recruited during the period 7/15/17-5/25/18. Each patient was administered the 40-item UPSIT. UPSIT scores were compared to age- and sex-matched controls from a normative database maintained at the University of Pennsylvania Smell and Taste Center using a paired t-test.

Results: Gout patients ranged in age from 31 - 86 years (mean: 59 years); 26 (87%) of patients were ≥ 40 years old and included 26 men and 4 women. The duration of gout ranged from 1- 43 years (mean: 9 years), with 19 having gout for >5 years. Visible tophi were observed in 6 patients (33%). C-reactive protein was within normal range except in one gout patient. Serum urate levels ranged from 5.1-12 mg/dL (mean: 6.29 mg/dL). Two patients were current smokers; both have microsomia. No patients had head trauma, chronic sinusitis, upper respiratory tract infections, alcoholism or neurological disorders.

The mean UPSIT scores of the two groups did not differ significantly [respective patient and control means (SDs) = 31.40 (5.79) and 31.80 (4.37); $t_{29} = -0.342$, $p = 0.74$].

Conclusion: This is the first study to quantitatively assess smell function in patients with gout. Despite being a systemic inflammatory disease, with multiple associated comorbidities, we did not find a statistically significant effect of gout on smell function using a well validated olfactory test.

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AB0888 A SURVEY FOR DIAGNOSIS AND TREATMENT OF PATIENTS WITH GOUT IN KOREA

Mi Ryoung Seo, Ji Na Yeo, Hee Jung Ryu, Hyo-Jin Choi, Han Joo Baek. Gil Medical Center, Gachon University College of Medicine, Division of Rheumatology, Department of Internal Medicine, Incheon, Korea, Rep. of (South Korea)

Background: The prevalence and incidence of gout has risen over the past few decades and the socioeconomic costs of gout have been increasing accordingly, but it is unclear whether proper medical care is provided for patients with gout.

Objectives: This study aims to investigate the actual status and adequacy of diagnosis and management of gout patients.

Methods: The patients with gout who visited between November 2017 and February 2018 were consecutively enrolled. Data were collected using a pre-designed questionnaire and reviews of medical records. The collected data included diagnosis and management of gout before starting a steady treatment in our clinic, and disease status at first visit to our clinic.

Results: In total, 172 gout patients were enrolled. The average age of the patients was 55 (interquartile range (IQR): 45-66) years, and 94.2% were men. The average disease duration was 8 (IQR: 4-13) years. The average age of first gout symptoms was 45 (IQR: 36-53) years. The first symptom started in the feet for 93.4% of patients. The patients in which the first symptom region was around large joints were 35.1%, and 17.3% of patients developed first gout symptoms around multiple joints. Several patients (64%) visited the hospital directly after their first acute gout attack. The first physicians to examine gout patients were orthopedic surgeons (38.2%), emergency doctors (23.6%), and rheumatologist (16%). Upon initial medical examination, 67% of patients were clinically diagnosed or suspected with gout. Monosodium urate crystals in synovial fluid or tophi were confirmed in 10.5%. Furthermore, 31% of patients had a history of pharmacology urate lowering therapy (ULT) after acute gout attack, and 84.4% were indicated for pharmacologic ULT upon first visit to our clinic. Additionally, 47.6% of patients showed symptoms of chronic kidney disease, past urolithiasis, or tophi, and 52.4% suffered from ≥ 2

gout attacks/year. However, only 11.3% of patients were receiving continuous ULT before visiting our clinic.

Conclusion: Most patients were clinically diagnosed without appropriate tests for gout diagnosis, such as joint aspiration, and only a very small number of patients were receiving adequate pharmacologic ULT. The management of gout seems to be inadequate in many respects.

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AB0888 ULTRASOUND FEATURES IN GOUT: A COMPARATIVE ANALYSIS WITH MATCHED CONTROL

Joana Silva¹, Daniela Faria¹, Joana Neves¹, Marcos Cerqueira², Joana Rodrigues¹, Soraia Azevedo¹, Sérgio Alcino¹, José Tavares-Costa¹, Carmo Afonso¹, Daniela Peixoto¹, Filipa Teixeira¹. ¹Unidade Local de Saúde do Alto Minho, Rheumatology, Ponte de Lima, Portugal; ²Hospital de Braga, Rheumatology, Braga, Portugal

Background: Gout is a frequent inflammatory disease characterized by deposition of monosodium urate crystals in joints and tissues in the presence of hyperuricemia (1). Ultrasound (US) is a simple imaging technique that has gained interest in the assessment of individuals with gout due to its ability to identify inflammation and joint damage, as well as crystal deposition. The most characteristic gout US findings are the presence of intra-articular aggregates and the double contour (DC) signal, included in the 2015 ACR/EULAR classification criteria.

Objectives: To identify potential differentiating US findings between individuals with gout and matched controls.

Methods: A cross-sectional study was conducted, including 57 gout adult patients and 32 adult individuals with a normal uricemia, matched by age and gender. Sociodemographic, clinical and analytical data were collected. Bilateral US grey scale evaluation of the 1st metatarsophalangeal joint (MTP1), 2nd metacarpophalangeal (MCP2) and knee was performed in all participants. The following findings were assessed: intra-articular effusion, synovial hypertrophy, bone erosion, DC signal and intra-articular deposits. None of the participants presented with clinical signs of arthritis at the time of the evaluation.

Results: The mean age of gout patients and healthy individuals was 63.3 $\pm$ 12.6 and 63.8 $\pm$ 10.5 years, respectively. The majority of the gout patients were male (87.7%), 77.2% had previous history of podagra and 26.3% had tophi. Mean disease duration was 4.3 years. Mean uricemia was 6.7 $\pm$ 2.0 mg/dl in gout patients and 4.9 $\pm$ 0.9 mg/dl in the control group. At the time of the study, 31 patients (54.4%) were treated with allopurinol, 9 (15.8%) with febuxostat, 1 (1.8%) with both allopurinol and febuxostat and 16 (28%) were not on urate lowering therapy.

Comparatively to the control group, in the MTP1, patients with gout presented more frequently with synovial hypertrophy (26 vs 0, $p < 0.001$), bone erosion (19 vs 0, $p < 0.001$), DC signal (7 vs 0, $p < 0.05$) and intra-articular aggregates (8 vs 0, $p < 0.05$). At the knee, patients showed more often effusion (19 vs 2, $p < 0.001$), synovial hypertrophy (26 vs 1, $p < 0.001$) and DC signal (8 vs 0, $p < 0.05$). At the MCP2, only the presence of erosion was significantly more common in the gout group (8 vs 0, $p < 0.05$). DC signal was found in 17 patients and in none of the healthy subjects ($p < 0.001$); this finding was more frequently observed at the knee. There was an association between previous gout crisis in the MTP1 and the presence of erosion in this joint ($p = 0.04$). An association was found between the presence of tophi and erosion ($p < 0.001$), DC signal ($p < 0.05$) and intra-articular aggregates ($p = 0.006$). There was no association between uricemia levels, disease duration and the different US findings.