Table

	Disease duration	Uric acid $\mu\text{mol/L}$	Creatinine $\mu\text{mol/L}$	Creatinine $\mu\text{mol/L}$
Sum score DC	0.35**	0.30**	0.26**	-0.27**
Sum score tophi	0.27**	0.13	0.27**	-0.37**
Sum score aggregates	0.16*	0.05	0.22*	-0.36**
Sum score DC, tophi and aggregates	0.29**	0.16*	0.29**	-0.40**

Table 2. Percentages of patients with different forms of ultrasound detected uric acid deposits

	Double contour		Tophus		Aggregates	
	Right	Left	Right	Left	Right	Left
Wrist	1.5	0.5	7.0	8.5	6.0	7.0
MCP 2	2.0	1.0	5.0	2.5	4.0	3.0
Distal femur cartilage	16.9	16.9	NA	NA	NA	NA
Talar cartilage	15.4	16.9	NA	NA	NA	NA
MTP 1	36.0	35.8	44.0	45.5	51.5	50.3
Triceps	NA	NA	15.0	12.5	32.8	31.8
Quadriceps	NA	NA	5.5	8.0	10.1	15.9
Proximal patellar tendon	NA	NA	5.0	7.0	9.5	13.4
Distal patellar tendon	NA	NA	19.5	15.0	42.5	37.3
Achilles	NA	NA	9.5	8.0	12.1	6.0

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SAT0424 PHENOTYPE OF PATIENTS WITH EARLY ONSET GOUT

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Background: Gout is a frequent inflammatory arthritis in men after 45 years old. In this common (CG) form, gout is associated with comorbidities (CMs) including metabolic syndrome, hypertension, type 2 diabetes (T2D), obesity, chronic kidney disease and cardiovascular (CV) diseases. In contrast, very few data are available for early onset gout (EOG), defined as first flare before 30 years old.

Objectives: The aim of this study was to compare gout characteristics and CMs between EOG and CG.

Methods: We retrospectively included all gout patients (pts) with ineffective ULT who were referred to our department between 2014 and 2018, and who had at least one visit between 9 and 15 months after first visit. At baseline, ineffective ULT was defined by a serum urate level (SUL) above target ($> 360 \mu\text{mol/L}$). Demographic characteristics, gout history and CMs, treatments were systematically recorded.

Results: Among 213 pts, 39 (18.3%) had experienced a first gout flare before 30 years old. Pts and gout characteristics are summarized in table 1. Mean age of first flare in EOG was $24.8 (\pm 5.5)$ years. Familial history of gout was more frequent in EOG than in CG (60.6 vs 24.6%). First flare involved the 1st metatarsophalangeal joint in 70% of EOG pts. EOG pts had more severe gout than CG pts: longer disease duration ($p<0.0001$), more flares in the last 12 months ($p<0.0001$), more tophi ($p=0.005$) and higher febuxostat (FBX) dosage ($p=0.02$) to achieve SUL target.

Pts with CG had more CMs than EOG pts: CV diseases, hypertension, T2D, dyslipidemia and kidney transplantation. Non-alcoholic fatty liver disease was more frequent in EOG than CG (61.1 vs 24.1%).

At final visit, 62.8 and 67.9% of EOG and CG patients, respectively, achieved SUL target ($p=0.56$). Proportion of pts taken ULT was similar in both groups as well as proportion of pts treated with allopurinol or FBX.

Table 1. Patient characteristics between early onset and common gout

Variables	Early onset gout (N=39)	Common gout (N=174)	p
Age at inclusion (years), (mean $\pm$ SD)	40.2 (12.2)	62.2 (11.8)	<0.0001
Sex (male)	38 (97.4%)	145 (83.3%)	0.02
BMI (kg/m^2), (mean $\pm$ SD)	29.6 (5.8)	28.9 (4.9)	0.49
Family history (n,%)	20 (60.6%)	30 (24.6%)	<0.0001
Age at first flare (years), mean $\pm$ SD)	24.8 (6.2)	55.4 (12.6)	<0.0001
Disease duration (years) (mean $\pm$ SD)	15.4 (12.6)	6.9 (7.6)	<0.0001
Tophi (n,%)	24 (61.5%)	58 (36.9%)	0.005
Urate arthropathy (n,%)	21 (65.6%)	61 (49.6%)	0.11
Number of flares last 12 months (mean $\pm$ SD)	4.7 (2.9)	3.0 (2.82)	0.009
eGFR (ml/min/1.73), (mean $\pm$ SD)	91.7 (33.4)	63.4 (24.5)	<0.0001
Baseline SUL ($\mu\text{mol/l}$) (mean $\pm$ SD)	495.9 (147.4)	521.1 (109.1)	0.23
CV diseases (n,%)	0	21 (13.2%)	0.02
HT (n,%)	9 (23.7%)	107 (64.8%)	<0.0001
Type 2 diabetes (n,%)	3 (7.9%)	41 (25.3%)	0.02
NAFLD (n,%)	11(61.1%)	14 (24.1%)	0.003
Dyslipidemia (n,%)	13 (33.3%)	70 (45.5%)	0.17
Chronic kidney disease stage 3-5 (n, %)	8 (25.8%)	58 (40.6%)	0.12
Final SUL ($\mu\text{mol/l}$) (mean $\pm$ SD)	360.7 (135.5)	336.6 (109.9)	0.26
SUL at target ($<360 \mu\text{mol/l}$) (n,%)	22 (62.8%)	110 (67.9%)	0.56
ULT final (n,%)	36 (92.3%)	148 (92.5)	0.97

BMI : body mass index; eGFR : estimated glomerular filtration rate; NAFLD : non-alcoholic fatty liver disease; SUL : serum urate level; ULT : urate-lowering therapy

Conclusion: In conclusion, EOG is more severe and EOG pts have less CMs. Moreover, EOG has a higher inheritability trait than CG patients suggesting different pathological mechanisms.

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SAT0425 CLINICAL CHARACTERISTICS AND RISK FACTORS OF ULCERATION OVER TOPHI IN PATIENTS WITH GOUT

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Background: With increasing prevalence of gout world-wide, ulceration associated with tophaceous gout is becoming increasingly common in recent years. Investigation of the clinical characteristics and risk factors will allow us to better understand the fact of ulceration over tophi and improve the management for such challenge problem.

Objectives: To describe clinical characteristics of ulceration over tophi in patients with gout and determine risk factors associated with ulceration.

Methods: Patients presenting with tophi or ulceration(s) over tophi were prospectively recruited and their clinical characteristics were recorded. Comparison of clinical characteristics and risk factors for ulceration were analyzed between groups.