Thus patients with smaller deposits were more likely to completely resolve the deposits.
Conclusion: We show that both life-style intervention and conventional urate lowering drug therapy reduce the volume of monosodium urate deposits. The size of MSU deposits, but not serum urate level, was the main factor that influenced complete resolution of deposits. This finding reemphasizes that the burden of deposits essentially defines the likelihood and time for complete resolution of gout.

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SAT0414 CLINICAL PRESENTATION OF PAGET DISEASE OF BONE: IS IT CHANGING? A RETROSPECTIVE ANALYSIS ON 368 PATIENTS

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Background: In the last few years, it has been reported a secular change of Paget disease of bone (PDB), expressed as a reduction of prevalence[1] and severity, assessed by disease extent[2].
Objectives: To retrospectively evaluate the baseline clinical and demographic characteristics of a contemporary cohort of patients affected by PDB, compared with a cohort of a previous decade[3].
Methods: Data were retrospectively extracted from a monocentric registry, which included PDB patients at their first evaluation in a tertiary rheumatology Center between January 2000 and September 2018. Descriptive data of baseline characteristics included demographics, presenting manifestation and diagnostic procedures (diagnosed by chance or by investigations requested for specific clinical manifestations), extent of PDB, and biochemical data. Patients were divided into two groups according to the year of first evaluation: group 1 before July 2007, group 2 after July 2007. Comparisons between the two groups were performed by T test and chi-square test; logistic regression was used to analyze the association between disease extent and other collected variables.
Results: The overall population included 368 patients (males (M) 57.6%, mean age at diagnosis [± standard deviation, SD] 62.0±12.4 yrs). Diagnosis was made by chance in 43.8% cases, 54.3% patients had symptoms at disease onset; 49.5% was monostotic, mean serum alkaline phosphatase at presentation (sALP) was 198.5±167.5 UI/L.
Group 1 included 217 patients (M 56.2%, mean age at diagnosis 61.0 ±11.6 yrs, 6.5% family history of PDB; 45.6% diagnosed by chance, 51.2% had symptoms at disease onset, mean sALP 218.9±11,7, 43.3% monostotic). Group 2 included 151 subjects (M 59.6%, mean age at diagnosis 64.3±11.1 yrs, 7.3% family history of PDB; 41.1% diagnosed by chance, 62.9% had symptoms at disease onset, mean sALP 162.7 ±14,2,58.3% monostotic).
Poliostotic disease was significantly higher in Group 1 vs Group 2 (p=0.007), and the odd to have a poliostotic disease was higher in Group 1 [OR 1.82 (IC 1.2-2.8), p<0,005]. sALP was significantly higher in Group 1 vs Group 2 (218,9±11,7 vs 162,7±14,2; p=0,003). No differences were found in sex, age at diagnosis, presence of family history of PDB between patients diagnosed incidentally or by symptoms.
Conclusion: Our data confirm the reduction of clinical severity, assessed by the proportion of skeleton involved, and the decrease of biochemical markers over time. The reduction of the disease extent is consistent with a serological biomarker of the disease, such as mean sALP levels.

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SAT0415 HIGH BODY FAT OF TRUNK IS POSITIVELY CORRELATED WITH SERUM URIC ACID IN MALE GOUT PATIENTS

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Background: Obesity is an important risk factor of gout which is defined by body mass index (BMI). However, BMI has been challenged for the limitation of failure to differentiate comprising tissues of the body. More accurate body composition (BC) has been frequently recommended to assess metabolic status.
Objectives: To investigate the characteristics of BC in gout patients and its clinical significance.
Methods: Consecutive gout patients who fulfilled the 2016 ACR/EULAR classification criteria were recruited between June 2017 and December 2018. BC was assessed by bioelectric impedance analysis including body fat percentage (BF%), the mass and distribution of muscle and fat in trunk and appendicular extremities. Demographic information, clinical characteristics and comorbidities were collected. Overfat was defined by BF% $\geq$25% for male and $\geq$35% for female.
Results: Among 362 recruited gout patients, 96.1% were male and the median age was 38 (30, 50) years, mean serum uric acid (sUA) was 9.2±2.2mg/dl, 18.0% presented tophi. The mean BF% was 25.8±6.4% with 53.6% overfat. Male gout patients with overfat (53.7%) showed more affecting joints, higher sUA and higher prevalence of comorbidities than those without overfat (P<0.05, Figure 1). Their BF%, trunk BF% and limb BF% were positively correlated with count of affecting joints, sUA, hypertension, metabolic syndrome and fatty liver in Spearman correlation analysis, respectively (r=0.133~0.424, all P<0.05). The male patients with overfat also presented higher BMI and waist circumstance (WC), higher trunk/limb BF% ratio (P<0.05, Figure 1). Their BF%, trunk BF% and limb BF% were also positively correlated with BMI and WC, respectively (r=0.604~0.755, all P<0.05). After adjustment for age, duration, family history, eGFR, hypertension, diabetes mellitus, dyslipidemia, metabolic syndrome, fatty liver, coronary heart diseases, urolithiasis, BMI and WC, multivariable linear regression showed that BF% (β=0.072, 95%*CI*

0.012~0.132, P=0.018) and trunk BF% (β=0.152, 95%*CI* 0.043~0.261, *P*=0.007), but not limb BF%, were positively correlated with sUA.

Figure 1 Clinical characteristics and body composition of gout patients

Characteristics	All patients (n=362)	Grouped by gender			Male patients grouped by overfat		
		Male (n=348)	Female (n=14)	P	Overfat (n=187)	Non-overfat (n=161)	P
Age, years	38(30, 52)	38(30, 50)	66(59, 72)	<0.001	38(30, 51)	37(30, 50)	0.969
Duration, years	3(2, 7)	3(2, 7)	3(1, 6)	0.423	4(2, 7)	3(1, 6)	0.163
Count of affecting joints	3(2, 6)	3(2, 6)	3(1, 5)	0.494	4(2, 6)	2(2, 5)	0.002
Family history, n(%)	130(35.9)	124(35.6)	6(42.9)	0.581	74(39.6)	50(31.1)	0.098
Tophi, n (%)	65(18.0)	64(18.4)	1(7.1)	0.472	36(19.3)	28(17.4)	0.655
Serum uric acid , mg/dl	9.2±2.2	9.2±2.2	9.2±2.5	0.957	9.6±2.1	8.7±2.2	<0.001
eGFR, ml/min-1/1.73m-2	83.8±17.0	84.3±16.9	70.4±11.7	0.002	85.1±18.2	83.5±15.3	0.395
Urolithiasis, n (%)	88(24.3)	85(24.4)	3(21.4)	0.795	49(26.2)	36(22.4)	0.405
Hypertension, n (%)	133(36.7)	124(35.6)	9(64.3)	0.029	83(44.4)	41(25.5)	<0.001
Diabetes mellitus, n (%)	36(9.9)	33(9.5)	3(21.4)	0.313	23(12.3)	10(6.2)	0.053
Dyslipidemia, n (%)	228(63.0)	218(62.6)	10(71.4)	0.504	131(70.1)	87(54.0)	0.002
Body mass index , kg/m2	25.5±3.6	25.5±3.6	25.7±3.1	0.882	27.4±3.3	23.3±2.6	<0.001
Obesity, n (%)	79(21.8)	77(22.1)	2(2.5)	0.392	73(39.0)	4(2.5)	<0.001
Waist circumstance, cm	90.8±9.4	90.8±9.5	89.3±7.4	0.551	95.9±8.3	85.0±7.2	<0.001
Metabolic syndrome, n (%)	165(45.6)	158(45.4)	7(50.0)	0.735	114(61.0)	44(27.3)	<0.001
Fatty liver, n (%)	172(47.5)	165(47.4)	7(50.0)	0.849	108(57.8)	57(35.4)	<0.001
Coronary heart disease, n (%)	8(2.2)	6(1.7)	2(14.3)	0.027	1(0.5)	5(3.1)	0.100
BF%, %	25.8±6.4	25.5±6.2	35.0±5.0	<0.001	30.1±3.8	20.1±3.7	<0.001
Overfat, n (%)	194(53.6)	187(53.7)	7(50.0)	0.783	187 (100)	0 (0)	<0.001
Trunk BF%, %	13.3±3.7	13.1±3.6	17.9±2.8	<0.001	15.8±1.9	10.1±2.4	<0.001
Limb BF%, %	11.0±3.7	10.7±2.8	18.1±10.2	0.017	12.7±2.1	8.4±1.5	<0.001
Trunk/Limb BF% ratio	1.22±0.15	1.22±0.14	1.10±0.24	0.003	1.25±0.11	1.19±0.17	<0.001

eGFR: estimated glomerular filtration rate; BF%: body fat percentage; ASMI: appendicular skeletal muscle index.

Conclusion: The characteristics of fat distribution in male gout patients is more in trunk and trunk BF% is positively correlated with sUA.
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SAT0416 ULTRASOUND EVALUATION IN FOLLOW-UP OF URATE-LOWERING THERAPY IN GOUT PHASE 2 (USEFUL-2): DURATION OF FLARE PROPHYLAXIS

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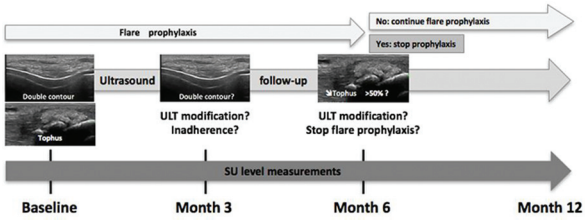
Background: Recent studies showed that ultrasonography (US) could be useful for managing urate-lowering therapy (ULT) in gouty patients. In the first phase of the present study (USEFUL-1), we suggested that US was an accurate tool to follow monosodium urate (MSU) crystal dissolution under efficient ULT.
For gout flare after starting ULT, prophylaxis is recommended during the first 6 months of ULT. The duration of gout flare prophylaxis over the 6 months is consensual with a grade B recommendation. However, little is known about the probability of relapse according to the urate load modification.
Objectives: To determine whether a modification of US features of MSU crystal deposition is associated with reduced number of flares after stopping gout flare prophylaxis.
Methods: We performed a 1-year multicentre prospective study including patients with proven gout and US features of gout. The first phase of the study was a 6-month US follow-up after starting (ULT) with gout flare prophylaxis. After 6 months of ULT, gout flare prophylaxis was stopped, followed by a clinical follow-up (month [M] 6 to 12). Outcomes were the proportion of patients with relapse between M6 and M12 according to the modification of US features of gout and determining a threshold decrease in tophus size according to the probability of relapse.
Results: We included 79 patients with gout (mean [± SD] age 61.8 ± 14 years, 91% males, disease duration 6.3 ± 6.1 years). Among the 49 completers at M12, 23 (47%) experienced relapse. Decrease in tophus size ≥ 50% at M6 was more frequent without than with relapse (54% *vs* 26%, P= 0.049). On ROC curve analysis, a threshold decrease of 50.8% in tophus size had the best sensitivity/specificity ratio to predict relapse. Probability of relapse was increased for patients with a decrease in tophus size <50% between baseline and M6 (OR 3.35 [95% confidence interval 0.98; 11.44]).
Conclusion: A high reduction in US tophus size is associated with low probability of relapse after stopping gout prophylaxis. US follow-up may be useful for managing ULT and gout flare prophylaxis.



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SAT0417 HOW EFFECTIVE IS GOUT EDUCATION PROGRAMME TO IMPROVE GOUT KNOWLEDGE AMONG PRIMARY CARE DOCTORS?

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Background: Gout is a potentially curable disease with simple pharmacological treatment, although its management remained suboptimal.[1, 2] A disconnection between primary care doctors who treat gout most frequently, and rheumatologists who lead the development of gout management guidelines, is one of the challenges in managing gout in primary care.[3] A concerted effort is needed to improve the quality of care of patients with gout and this includes physician education.[4]
Objectives: To determine the effectiveness of gout educational programme in improving gout knowledge among primary care doctors.
Methods: A gout education programme consisted of five 20-minute presentations on gout (challenges in gout, principles of gout management, treat to target, disease burden and gout diet) and a session on case discussion of two gout cases was conducted for primary care doctors. Participants were invited to complete the same set of questions distributed before (pre-test) and after (post-test) the programme. A set of 10 true/false multiple choice questions (MCQ) based on a clinical scenario of a patient with gout was constructed and vetted by two rheumatologists. Comparison between the pre-test and post-test scores were analysed using paired t-test.
Results: Forty-four primary care doctors who attended gout educational programme, answered pre-test and post-tests and the scores are shown in Table 1. The scores for recall questions were higher than application questions.The mean scores for recall questions in post-test were significantly higher compared to pre-test (4.35±0.73 vs 3.51±0.47, p<0.01) but not significant for application questions (2.91±0.71 vs 2.79±0.62, p=0.56). Less than half of participants obtained correct answers for 13 out of 50 options in the pre-test mainly in questions 2, 3, 4, 6 and 7. (Table 1)