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SAT0420 IS THERE LIFE TO GOUT TREATMENT AFTER RHEUMATOLOGY IS OUT OF THE EQUATION?

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Background: Previous studies show a low persistence rate to urate-lowering therapy (ULT), in patients diagnosed with gout, after being discharged back to primary care from Rheumatology consultations.

Objectives: To assess persistence and adherence to ULT in patients with gout, previously evaluated in specialized care, who have been discharged from Rheumatology consultations to their primary care physician.

Methods: A transverse study of patients with gout included in an inception cohort and followed in a tertiary care centre. Patients were selected according to their status of "discharge", in case they had been referred back to their primary care centre from specialized care, or "loss", in case they had stopped coming to Rheumatology consultations.

Data, including active prescription of ULT, time since suspension of ULT (if applicable), last serum uric acid (sUA) levels and time for that determination, were procured by electronic history. General data of patients and follow-up were obtained from the database of such cohort. Patients lacking data or deceased were dismissed from the study.

Results: A total of 518 patients, classified either as "discharge" or "loss", with available data accessed by electronic history, followed in specialized consultations during an average time of 52 months (36, 18-72) were studied. Average time since their last visit to Rheumatology services was 90 months (76, 36-132). 88% of them had, at least, one determination of sUA; 80% within the last 12 months, with no differences between the patients with or without active treatment. 376 patients (72.6%) out of 518 had an active prescription of ULT, 338 of them ordered by primary care and 38 by specialized care.

Patients lost during follow-up showed a lower rate of ULT prescription and a higher requirement of specialized attention after than those who were discharged from Rheumatology.

	Loss (172)	Discharge (346)	P
Follow-up (number of months)	31±34	64±49	<0.001
Time since follow-up (number of months)	113±72	80±55	<0.001
Prescription (%)	64	73	<0.001
sUA w/o prescription (mg/dl)	7.44±2.02	7.07±1.33	0.231
sUA <6 mg/dl w/o prescription (%)	18	29	0.275
sUA w/prescription (mg/dl)	6.26±2.09	5.66±1.59	0.010
sUA <6 mg/dl w/ prescription (%)	55	58	0.764
Adherence (% average TPM)	76±30	85±24	0.007
Adherence (% TPM >80%)	64	79	0.003
Need of specialized care after (%)	11	6	<0.001

Conclusion: Patients discharged from Rheumatology consultations maintain good persistence to long-term treatment with ULT, higher than those who were lost during consultation follow-up. Nevertheless, persistence and adherence in the latter group show a higher rate than the ones obtained in patients being followed by primary care, which does not exclude a beneficial influence of the previous assistance provided by Rheumatology services.

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SAT0421 LONG-TERM URATE-LOWERING THERAPY: IS IT 'ALL LIFELONG' NECESSARY?

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Background: It has been published that 13% of gout patients remain in a situation of normouricemia after the suspension of urate-lowering therapy (ULT) and, consequently, would not require lifelong treatment. Prospective and specialized follow-up in a tertiary care centre may have favored these positive outcomes, which have not been replicated afterwards.

Objectives: To assess the percentage of patients diagnosed with gout, previously followed in Rheumatology consultations, in situation of normouricemia once ULT is suspended.

Methods: A transverse study of patients with gout included in an inception cohort and followed in a tertiary care centre. Selected patients were no longer followed by specialized attention.

Data, including active prescription of ULT, time since suspension of ULT (if applicable), last serum uric acid (sUA) levels and time for that determination, were procured by electronic history. General data of patients and follow-up were obtained from the database of such cohort.

Results: One hundred and forty-two (27.4%) out of 518 patients, with available data accessed by electronic history, lacked prescription of ULT, with an average time since its interruption of 65 months (58, 28-120) and sUA average levels of 7.2±1.7 mg/dl. Nevertheless, 19.2% of these patients showed sUA levels <6 mg/dl, against 61% and 63% of patients with active ULT prescription followed by primary care and specialized care, respectively.

Considering a higher target level of uric acid in the long run and taking into account that these patients had already received treatment for an average mean of 50 months, either in patients with active ULT prescription or patients without it (p=0.35), 41.7% of patients without ULT showed sUA levels <6.8 mg/dl vs. 77% of those with an active ULT prescription (both primary and specialized care).

Patients without ULT, showing sUA levels <6 mg/dl or <6.8 mg/dl also showed lower sUA levels during previous follow-up in Rheumatology consultations than those with sUA levels out of target (4.9mg/dl vs. 5.2mg/dl, p<0.01 and 5.0mg/dl vs. 5.3mg/dl). Likewise, among patients with sUA levels <6mg/dl during follow-up, 25.3% showed sUA levels <6mg/dl vs. 0% of those with sUA levels >6mg/dl during follow-up (p<0.01).

Conclusion: Between 20% and 40% of patients without a prescription of ULT, previously followed by Rheumatology, showed sUA levels <6mg/dl and <6.8mg/dl, respectively.

Patients with sUA levels below target during follow-up show a higher rate of sUA levels in target once ULT is suspended.

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SAT0422 URATE VOLUME AND DISTRIBUTION BY DUAL ENERGY CT: CLINICAL AND RADIOLOGICAL CORRELATION IN GOUT PATIENTS

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Background: Dual-energy CT (DECT) has shown tremendous potential as a novel non-invasive method of urate detection in patients with gout.

Objectives: Our aim was to determine the concordance between urate volume and distribution measured on DECT with clinical presentation among patients with gout.

Methods: We conducted a retrospective descriptive study of patients with gout who were referred by a rheumatologist for gout DECT scans between January 2008 and February 2018. At our institution, routine DECT scans for gout consist of four sets of images with limbs scanned in pairs: the hands/wrists, elbows, knees and ankles/feet. We obtained volumetric measurements for all four anatomical regions, and assessed the concordance with clinical presentation as retrieved from patient electronic health record.

Results: A total of 182 patients were included in this study; 96 patients (80.2% male, age range: 27-90, mean age: 62) had urate deposits on DECT scans. Among urate-positive patients, the mean total volume of deposits was 2.45 cm³ (hands/wrists: 0.17 cm³, 7%; elbows: 0.62 cm³, 25%; knees: 0.70 cm³, 28%; ankles/feet: 0.96 cm³, 39%). The average number of urate-positive joints was 2.5, higher than that of clinically symptomatic joints (1.9). Discordance between DECT results and clinical symptoms were seen more often in elbows (46 urate-positive vs. 22 symptomatic) and knees (68 vs. 43), compared with hands/wrists (31 vs. 30) and ankles/feet (90 vs. 87). Only in 25 (26.0%) patients, the distribution of symptomatic joints fully matched the distribution of urate deposits. In 6 patients (6.3%), there was no overlap between these two distribution patterns.

Conclusion: On DECT scans, most urate deposits in gout patients occur in the ankles/feet, followed by knees, elbows, and hands/wrists. DECT scans can reveal urate deposit in asymptomatic joints, especially in elbows and knees. Assessing the concordance of urate distribution with clinical presentation in all limb joints in gout patients, our results can help understand the pathophysiology of urate deposition in gout, and guide the development of DECT protocols for the screening, assessment and follow-up management of gout patients.

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SAT0423 WHERE SHOULD WE EXAMINE FOR URIC ACID DEPOSITS? RESULTS FROM THE NOR-GOUT ULTRASOUND STUDY

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Background: Ultrasound (US) has received an increasing attention in detecting uric monosodium urate (MSU) deposits, and US is included in the ACR/EULAR classification criteria for gout. OMERACT has developed definitions for US elementary lesions in gout including double contour (DC) sign (deposits of crystals on the surface of cartilage), tophus (larger hypo-echoic aggregation of crystals, usually well delineated) and aggregates (small hyper-echoic deposits).

Objectives: The present objective was to explore by US the most frequent locations of MSU deposits.

Methods: Baseline data from a prospective observational study were used where patients with crystal-proven gout who presented after a recent gout flare were included (202 patients (mean (SD) age 56.6 (14.2) years, disease duration 8.0 (7.7) years, 94.1% men), all with insufficiently treated serum uric acid level (>360 µmol/L/>6 mg/dl). We performed an extensive assessment with US (GE E9 machine, grey scale 15MHz) for semi-quantitative scoring of MSU deposits (0=none, 1=possible/small, 2=moderate, 3=major) using OMERACT definitions for DC, tophi and aggregates. The following locations were examined bilaterally; radiocarpal, MCP 2 and MTP 1 joints, triceps and quadriceps insertions, patellar (proximal and distal) and Achilles tendons as well as distal femur (maximal flexed knee) and talar cartilage. Sum scores for each crystal deposit were calculated and correlations were performed by use of Spearman rho, comparisons by paired samples test, and frequencies of deposits were calculated as percentages.

Results: The baseline mean (SD) serum uric acid level was 494 (87) µmol/L. Table 1 shows uric acid deposits to be correlated with kidney function and disease duration. Table 2 includes frequencies with at least moderate US scores (≥2) in the different joint and tendon localisations and shows DC primarily to be found in MTP1, followed by talar and femoral cartilage. Tophi and aggregates were primarily found in MTP1, followed by distal patellar and triceps tendons. There were no major differences between right and left side. In 25 patients (12.5%) DC was seen on femoral or talar cartilage but with no deposits in the MTP1 joint.

Conclusion: Uric acid deposits were associated with reduced kidney function as well as disease duration. When gout is suspected the present study suggests US examinations of MTP1, distal patellar and triceps tendons as well as talar and femoral cartilage to be the most important sites to examine for presence of MSU deposits.