Methods: Patients with clinical diagnosis of gout, a first outpatient visit between January 2010 and March 2018 and a follow-up of at least 6 months were included in a retrospective cohort study, conducted in two rheumatology centres in the Netherlands. From this cohort patients with DM starting ULT were selected. Patients with metformin use were compared to patients using other or no antidiabetic medication (control group). Metformin use was defined as use $\geq 80\%$ of the time during the first six months after initiation of ULT. To evaluate the anti-inflammatory effect, the differences in incidence density (ID) of gout flares in the first six months after starting ULT was measured and analysed using Poisson regression. To evaluate the SUA lowering effect, the difference in baseline SUA, proportion of patients reaching target serum uric acid (SUA < 0.36 mmol/l) at six months follow up, and ULT dosage at time of reaching this target were analysed. All analyses included correction for confounding.

Results: Of 2108 gout patients, 309 patients who started ULT also had DM, with 155 in the metformin group and 154 in the control group (table 1). ID of flares was 2.8 and 3.3 per patient year in the control and metformin group respectively, resulting in an incidence rate ratio of 0.93 (95% CI 0.75 – 1.15). SUA levels at baseline were similar, between the two groups (Table 1, $p=0.31$). At six months 46.1% and 57.4% reached target SUA in the control and metformin group respectively, odds ratio of 1.30 (95%CI 0.80 – 2.08). No difference was found in allopurinol dose at time of reaching target SUA between the groups (1.14 mg, 95% CI -38.89 – 41.19).

Table 1. Baseline patient, disease and treatment characteristics

	Metformin (n = 155)	Control (n = 154)
Age (years)	70.9 (+/- 13.3)*	75.3 (+/- 14.5)*
Males, n (%)	72.9	64.3
BMI (kg/m ²)	30.1 (+/- 5.8)**	30.5 (+/- 6.6)**
Comorbidities		
Hypertension (%)	65.8	64.3
Hypercholesterolemia (%)	20.0	18.2
Serum uric acid baseline (mmol/L)	0.53 (+/- 0.14)	0.54 (+/- 0.13)
Renal function, eGFR (ml/min/1.73m ²)	60.0 (+/- 21.0)*	50.0 (+/- 34.0)*
Co-medication		
Diuretics (%)	67.7	60.4
Insulin (%)	19.4	23.4
Tophi (%)	34.2	33.8
Erosive gout (%)	17.4	18.2
Type of ULT (%) allopurinol	98.1	98.7
Start dose allopurinol (mg/day)	108 (+/- 49.4)	105 (+/- 54.5)

* = significant difference between 2 groups, $p < 0.05$

** = $> 50\%$ of data is missing

Conclusion: In contrast to a previous report¹, in this study in patients with DM and gout and starting ULT, metformin does not have a clinically relevant added anti-inflammatory or urate lowering effect.

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THU0413

KEY ROLE OF THE CLINICAL NURSE SPECIALIST IN PATIENTS WITH GOUT: RESULTS OF A QUALITY-OF-CARE SURVEY

E. Calvo-Aranda¹, F. M. Sanchez-Aranda¹, M. T. Navio Marco¹, L. Cebrian¹, M. A. Matias de la Mano¹, L. Lojo¹. ¹Hospital Universitario Infanta Leonor, Rheumatology, Madrid, Spain

Background: Gout is the most common nontraumatic arthritis. With a prevalence in Spain of 2.4% and an increasing incidence, many gout patients are treated in Rheumatology. Different comorbidities complicate the management of this disease that not only attacks joints, but also induces kidney damage and accelerated atherosclerosis. This, together with a poor adherence to urate-lowering therapies and a suboptimal management, justifies its relevant morbidity and mortality, with high socioeconomic impact. Some studies suggest enhancing the role of the Clinical Nurse Specialist (CNS) in the care of gout to combat therapeutic failure

Objectives: To determine the factors that affect the perceived quality and satisfaction of gout patients treated in Rheumatology with CNS support and identify areas for improvement

Methods: In 2018, we implemented the following nurse-supported visit protocol - 1st (rheumatologist and nurse; face-to-face): clinical history, joint examination, vital signs, anthropometrics, start of treatment, comorbidities management, health promotion

- 2nd (nurse; telephone, after analytical results): 1 month after 1st visit. Targeted questions (adherence, side effects, attacks, blood pressure, lifestyle habits) and therapeutic adjustment

- 3rd (rheumatologist and nurse; face-to-face): at 3-6 months. Targeted questions, joint examination, vital signs, anthropometrics, therapeutic adjustment, health promotion

- 4th (rheumatologist and nurse; face-to-face): at 12 months. Targeted questions, examination, therapeutic adjustment, health promotion. Subsequently, semi-annual/annual appointments in Rheumatology or Primary Care, according to patient complexity and gout control

We applied a treat-to-target strategy (serum uric acid < 5.6 mg/dl), facilitating patient access to us in case of attack, side effects or doubts. We conducted a cross-sectional observational study with demographic data and questions about care aspects included in a survey. We invite to respond anonymously and voluntarily to patients with a follow-up of ≥ 6 months

Results: 44 surveys were obtained between August 2019 and January 2020. 95% male, 55% with an age range of 46-60 years; 41% > 60 years. 68% considered the referral time to our Department reasonable; excessively long for 14%. All respondents were satisfied with the face-to-face nurse-supported consultation, and 93% considered the telephone CNS consultation to be good. 57% were not able to remember the name of the CNS, compared to 27% who did not know the rheumatologist name. 91% considered that the time to solve doubts and for explanations was enough. 46% considered the availability of CNS/rheumatologist as good, and 37% as excellent. The global satisfaction was good in 48% and excellent in 43%

Conclusion: We found a high global satisfaction in gout patients followed in our Department. They valued very positively the role of CNS in the face-to-face and telephone consultations, as well as the staff availability, their dedication to answer questions and offer explanations. We must remember our names to patients and optimize referral to our Department. Exploring patients' opinions is essential. It improves communication, adherence and attention offered, and allows to provide them a better experience in their relationship with the Department

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ORDINARY LIGHT MICROSCOPY IS ABLE TO IDENTIFY MOST CRYSTAL-CONTAINING SYNOVIAL FLUIDS

J.A. Bernal¹, M. Andres^{2,3}, S. López Salguero⁴, V. Jovani², P. Vela-Casasempere^{2,3}, E. Pascual³. ¹Hospital Marina Baixa, Rheumatology, Villajoyosa (Alicante), Spain; ²Hospital General Universitario de Alicante. Instituto de Investigación Sanitaria y Biomédica de Alicante, Rheumatology, Alicante, Spain; ³Universidad Miguel Hernández, Medicina Clínica, Elche, Spain; ⁴Hospital Universitario de Torrevieja, Rheumatology, Torrevieja, Spain

Background: Optical microscopy remains the gold standard for the diagnosis of crystal arthropathies. The complete protocol consists of three phases. In the first stage, microscopy with simple light provides information on the morphology of the crystal. The second stage, polarized light, allows detecting the intensity of the birefringence. Finally, with the first-order red compensator, the type of elongation is detected, positive for calcium pyrophosphate (CPP) crystals and negative for