retrospective series have reported skin adverse events under both allopurinol and febuxostat.

Objectives: To assess the cutaneous safety of febuxostat when used in patients with previous skin reactions to allopurinol.

Methods: A multicentre retrospective, descriptive study performed in seven Rheumatology units around Spain. Crystal-proven gout patients with previous CAR to allopurinol and treatment with febuxostat were selected. Demographic (age, gender), clinical (skin events, liver disease, concomitant thiazides) and laboratory variables (serum urate (SU), glomerular filtration rate) were collected. The primary study variable was the rate of patients developing CAR also with febuxostat. A descriptive analysis with estimation of 95% confidence interval (95%CI) is presented.

Results: Sixty-seven gout patients with prior allopurinol-related CAR treated with febuxostat were enrolled. Their average age was 68.1 years (SD±14.8), being 49 males (73.1%). Thirteen of them were under thiazide treatment (19.4%) and average glomerular filtration rate was 66.1 ml/min (±24.3) when allopurinol was started, at a median dose of allopurinol of 100 mg/day (IQR 50-300) and mean SU of 8.9 mg/dl (±1.7). The reported CAR under allopurinol were nonspecific in 55 (82.1%), maculopapular rash in 9 (13.4%), and Stevens-Johnson's syndrome in 3 (4.5%). Out of 67 patients, 10 developed CAR with febuxostat (14.9%; 95%CI 8.3-25.3%): nonspecific in 8 cases, one case of maculopapular rash and other of Stevens-Johnson's syndrome. Median (IQR) glomerular filtration rate, starting dose of febuxostat and SU level were 69.5 (42-87.8), 80 mg/day (40-80) and 8.2 mg/dl (7.15-9.14), respectively.

Benzbromarone was initiated in all 10 patients with CAR to both allopurinol and febuxostat, and only one developed a nonspecific rash.

Conclusion: In this multicentre study, around 15% of patients with prior allopurinol-related CARs also developed them with febuxostat. Further prospective and intervention studies are needed to confirm these results, though caution is recommended when using febuxostat in this subgroup of patients.

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SAT0442 CALCIUM PYROPHOSPHATE CRYSTAL ARTHRITIS DURING HOSPITALIZATIONS: A PROSPECTIVE, CRYSTAL-PROVEN CASE SERIES

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Background: Despite having passed more than fifty years after its initial description, essential questions for calcium pyrophosphate (CPP) crystal disease, such as clinical spectrum, diagnosis or management schemes, remain unsolved. Acute flares often occurred during hospitalizations. Scant reports have addressed this common setting for CPP crystal disease, and whether these patients behave similarly to ambulatory cases is unknown.

Objectives: The aim of this work was to describe in a prospective way a crystal-proven case series of patients developing acute CPP crystal arthritis during hospitalizations for another conditions.

Methods: An observational, cross sectional descriptive study was conducted in two Spanish centers from November 2013 to December 2018. A prospective convenience sampling was employed to select patients with crystal-proven CPP acute arthritis seen during hospital admissions. Demographic, clinical and CPP-related variables were collected, and X-rays (pelvis, knees, hands, affected joint when different) and laboratory tests (to rule out associated metabolic conditions) were systematically requested. A descriptive analysis is presented.

Results: 90 episodes of acute CPP arthritis in 87 patients were seen in the study period, with an average age of 81.8 years (SD 7.7), 50.6% of

them men. Approximately 26% of patients reported prior episodes of arthritis, most of them (68.4%) as outpatients. Only three patients were on preventive treatment for CPP arthritis (two on colchicine and one on low dose glucocorticoids). Regarding the acute CPP arthritis during admissions, they were predominantly monoarticular (81.0%) and the main involved joints were knee (46.0%), wrist (13.8%) and ankles (6.9%). The reasons for admission were diverse, with a mean of 7.7 days (SD 9.1) from admission to flare. About X-rays, 23.8% showed no chondrocalcinosis (CC) in the evaluated joints [61/80]. In 57.1% of patients there was chondrocalcinosis in the affected joint [44/77] and regarding usual joints: 74.3% in knees [55/74], 51.5% in triangular carpal ligament [34/66], 25.4% in metacarpo-phalangeal joints [17/67], 20% in pubic symphysis [14/70] and 17.6% in coxofemoral joints [12/68]. A secondary form of osteoarthritis was only seen in 10 patients (12.5%). About associated metabolic diseases, one case of primary hyperparathyroidism-related hypercalcemia and five cases of hypomagnesemia at the time of the flare were detected. In all six patients with a polyarticular presentation, laboratory tests for rheumatoid factor and ACPA were negative.

Conclusion: From the findings of this prospective, crystal-proven series of CPP crystal arthritis in an intrahospital setting, we can remark:

1. The low numbers of previous ambulatory flares may suggest a different clinical entity of CPP disease.
2. Radiological CC was absent in around a quarter of patients despite a extensive assessment, so synovial fluid analysis remains essential for diagnosis.
3. The rarity of associated metabolic diseases seen runs against ruling out secondary causes of CPP disease in this setting.

Disclosure of Interests: None declared

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SAT0443 RECONCILIATION OF URATE LOWERING THERAPIES DURING HOSPITALIZATION AND THE IMPACT OF RHEUMATOLOGIC CONSULTATION ON MANAGEMENT OF INPATIENT GOUT FLARES

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Background: Hospitalizations complicated by gout flares have an impact on patient care. Delayed diagnosis and suboptimal management can lead to prolonged discomfort, impair chronic outcomes of the disease and lengthen the hospitalization⁽¹⁾. Patients on urate lowering therapy (ULT) are frequently admitted to the hospital for unrelated causes but there is variability in inpatient medication management of the urate lowering agent and acute management of the flare.

Objectives: In this descriptive study, we analyse the variability of reconciliation of ULT on admission and discharge and the impact of rheumatology consultation on acute and chronic management of gout.

Methods: Patients- above the age of 18- admitted to our tertiary care hospital from 01/01/2010 to 01/01/2016 with an ICD-9 or an ICD-10 diagnosis of gout were reviewed. The first 200 patients underwent a retrospective chart review as a pilot study for an ongoing project. We reviewed patient demographics, laboratory testing, and co-morbid conditions; medications on admission and discharge, incidence of gout flare-diagnosis and management during hospitalization, rheumatology consultation and discharge plan for these patients.

Results: Of the 200 patients reviewed, 2.69 admissions per person. We further described the patients who had a gout flare during hospitalization (n =54, 27%). 66% of these patients were males, mean age 69.8 years and BMI 31.78kg/m². A majority of patients had hypertension, renal disease, and dyslipidemia (Table 1).

70% of the patients were on chronic medications for gout (Table 2). 29.6% of these patients were continued on these agents upon admission and only 64.8% of these patient was eventually discharged on these drugs.

Rheumatology consulted for 68.5% of the patients. Arthrocentesis was more frequently performed when rheumatology was consulted (70% vs.17.6%; p<0.001). Rheumatology consultation did not decrease length of stay in the hospital. 78.5% of the patients managed by primary team were discharged on a ULT or colchicine compared to 100% in the group managed by rheumatology consult team (100% vs 78.5%; p<0.0431). Out-patient rheumatology follow up was documented in discharge papers for 62% of the patients managed with rheumatology consult compared to 11.7% in the comparison group. (62% vs 11.7%; p<0.002).

Conclusion: Rheumatology consultation improved adherence to guidelines in diagnosis and management of gout flare and improved the discharge planning and follow up.

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TABLE 1

BASILINE DEMOGRAPHICS	TOTAL PATIENTS (n=200)	PATIENTS WITH A GOUT FLARE (n=54)	RHEUMATOLOGY CONSULT (n=37)	PRIMARY TEAM (n=17)
Age (years)	70.99 ± 12.33	69.89 ± 11.28	70.62 ± 11.94	68.29 ± 9.82
RACE N(%)	164(82)/30 (15)/6(3)	49(90.8)/3(5.5)/2 (3.7)	32(86.4)/3(8)/2(5.4)	17(100)/0/0
African-American/Caucasian/Others				
BMI (kg/m ²)	31.39 ± 9.21	31.79 ± 8.83	31.71 ± 7.75	31.94 ± 10.88
Hypertension	177(88.5)	48 (88.9)	32 (84)	16 (94)
Diabetes mellitus	84 (42)	25 (46)	18 (48.6)	7 (41)
Renal dysfunction	139 (69.5)	43 (79.6)	29 (78)	14 (81)
Cardiovascular disease	119 (59.5)	25 (46.3)	17 (46)	8 (47)

TABLE 2

	TOTAL PATIENTS (n=200)	PATIENTS WITH A GOUT FLARE (n=54)	RHEUMATOLOGY CONSULT (n=37)	PRIMARY TEAM (n=17)
No of patient on chronic Gout medications N (%)	169 (84.5)	38 (70)	24 (64.8)	14 (82)
Allopurinol/Febuxostat	139 (69.5)/2 (1)	23 (42.6)/2 (3.7)	15 (40.5) 2 (5.4)	7 (41.2)/0
Colchicine	50 (25)	25 (46.3)	15 (40.5)	9 (52.9)
Combination of drugs	22 (11)	12 (22.2)	8 (18.9)	2 (11.7)
Inpatient	117 (58.5)	16 (29.6)	10 (27)	6 (35.3)
Continuation of medication				
Medications on discharge	153 (76.5)	35 (64.8)	24(64.8)	11 (78.5)
Length of Hospitalization (days)	5.00 ± 4.83	5.06 ± 2.56	4.73 ± 2.34	5.81 ± 2.99
Rheumatology follow up: N (%)	35 (17.5)	25 (46.3)	23 (62)	2 (11.7)

Disclosure of Interests: None declared

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SAT0444 DETECTION OF CLINICAL FORMS AND RISK FACTORS OF CPPD DEPENDING ON AGE

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Background: CPPD is more often diagnosed in elderly and old age. The age peculiarities of the disease are not studied well.

Objectives: to assess clinical forms of CPPD, impact of risk factors and concomitant diseases depending on age.

Methods: the study included 113 patients (59 women and 54 men) with verified diagnosis of CPPD (according to McCarty criteria); all had calcium pyrophosphate dehydrate depositions in synovial fluid. The mean age was 60.2±11.8 years. Roentgenography of knee joints was conducted in anteroposterior and lateral views, of hands – in frontal view. The patients were divided into two groups: <55 years – 38 patients, with the mean age of 46.7±7.1 years; and >55 years – 75 patients, with the mean age of 65.5±7.8 years.

The study compared clinical characteristics according to the classification (presence of acute or chronic arthritis, osteoarthritis (OA) with CPP crystals, VAS pain assessment, presence of chondrocalcinosis of hands and knees according to roentgenography images, presence in past history of injuries and familial chondrocalcinosis, and presence of hypomagnesemia, hyperparathyroidism); presence of concomitant diseases (rheumatoid arthritis (RA), gout, chronic kidney disease (CKD) (over stage 3 GFR <60 mL/min/1.73m² using the MDRD formula), reception of diuretics.

Results: chronic arthritis was detected more often in the patients >55 years (63 pts (84%) as against the patients <55 years (13 pts (34%)) (p=0.001). On the contrary, acute arthritis was registered more often in the patients <55 years (in 10 pts (26%) than in the patients >55 years

(in 4 pts (5%) (p=0.014), as well as OA with CPP crystals – in 15 pts (40%) <55 years and in 8 pts (11%) >55 years (p=0.003). The mean VAS in the group >55 years was 51±20 mm and in the group <55 years – 40±20 mm. During the past year, reception of NSAIDs or colchicine due to painful joints was significantly more often needed by the patients >55 years – 68 pts (91%) than the patients <55 years – 29 pts (76%) (p=0.005). Familial chondrocalcinosis was registered equally often in the patients <55 years – 6 pts (16%) and in the patients >55 years – 2 (3%) (p=0.46).

According to the roentgenography images, knee chondrocalcinosis was significantly more often registered in the patients >55 years – 49 pts (65%) than in the patients <55 years – 14 pts (37%) (p=0.001). According to the hands roentgenography, chondrocalcinosis was detected equally often in the patients <55 years – 21 pts (55%) and in the patients >55 years – 36 pts (48%).

Hyperparathyroidism was almost equally often detected in the patients >55 years – in 8 pts (11%) and in the patients <55 years – 6 pts (16%) (p=0.48), as well as its combination with gout in 20 pts (27%) and 8 pts (21%) respectively (p=0.44); hypomagnesemia was registered in 1 patient (3%) <55 years, and its combination with rheumatoid arthritis was not registered in the patients <55 years, whilst in the patients >55 years it was detected in 5 pts (7%) (p=0.09). Presence of CKD was detected in 2 pts (6%) <55 years and in 10 pts (13%) >55 years (p=0.2). Its combination with OA was registered significantly more often in the patients >55 – in 59 pts (79%) than in the patients <55 years – 9 pts (24%) (p=0.005).

Diuretics were more often received by the patients >55 years – 27 pts (36%) than by the patients <55 years – 5 pts (13%) (p=0.006).

There were no significant differences detected in the presence of joint injuries in past history – in 22 pts (58%) <55 years and in 35 pts (47%) >55 years.

Conclusion: Prevalence of CPPD in young people may be underestimated; the frequency of detection of factors associated with CPPD in different age groups is identical, excluding OA, which is more often diagnosed in patients >55 years. The patients with CPPD >55 years are more often diagnosed with chronic form of arthritis, they more often need to receive NSAIDs and colchicine and more often are diagnosed with chondrocalcinosis of the knee.

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SAT0445 ADEQUATE URATE LOWERING THERAPY FOR GOUT IS RARE IN CLINICAL PRACTICE BUT PRESERVES RENAL FUNCTION WHEN EFFECTED

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Background: Optimal urate lowering therapy (ULT) as defined by most guidelines requires monitoring of serum urate (SU) and titration of the medication dose to achieve a target level of SU. In Sweden, allopurinol is the most widely used ULT and most patients with gout are managed in primary care. As a first step towards implementation of gout treatment guidelines in the Swedish region of Dalarna, we undertook a register study to assess how allopurinol is prescribed and to what extent monitoring of SU takes place.

Objectives: To determine the proportion of patients with gout that receive a) ULT and b) adequate ULT and to determine to what extent SU is monitored. A secondary aim was to explore the effects of adequate ULT on SU and estimated glomerular filtration rate (eGFR) over time.

Methods: Data was retrieved from the electronic healthcare record database of the region. The database holds records of all diagnoses at visits to physicians, prescriptions made in primary care as well as results of laboratory tests. We searched the database from 1997-2012 for individuals with a first diagnosis of gout during 2000-2012 and retrieved data for all prescriptions of allopurinol for the identified patients. Results and dates of SU and creatinine measurements after gout diagnosis were retrieved. MDRD eGFR was calculated from s-creatinine, sex and the age of the patient at the time of measurement. The value nearest in time before initiation of ULT was defined as the baseline measurement for both urate and creatinine. Duration of therapy was defined as number of days from first to last prescription adding 365 days (the usual period for which chronic medication is prescribed in Sweden). The mean daily dose of allopurinol was estimated from prescription data.