Abstract AB1040 – Table 1. US signs in groups; Group: I- pts.with acute gout attacks; II- pts.without acute gout attacks

Joint	"Double contour", N (%)		Synovial fluid, N (%)		Synovial hypertroph, N(%)		PD signal, N(%)	
	Group		Group		Group		Group	
	I	II	I	II	I	II	I	II
Wrist	14 (35%)	11 (25%)	8 (21%)	6 (14%)	5 (13%)	5 (11%)	4 (10%)	1 (2%)
MTP1	31 (78%)	30 (65%)	34 (85%)	28 (61%)	23 (58%)	22 (49%)	22 (55%)	10 (20%)
TT	18 (46%)	15 (32%)	10 (25%)	8 (18%)	6 (16%)	5 (12%)	5 (14%)	1 (2%)
Knee	27 (68%)	24 (53%)	17 (43%)	17 (37%)	11 (28%)	9 (20%)	3 (8%)	0 (0%)
P	>0.5		>0.05		>0.05		<0.05	

Conclusions: Our results show the presence of laboratory and ultrasound indicators of joint inflammation in gouty patients at the interclinical stage as well as in patients with acute gout attack. The results of this study show that gout is a chronic inflammatory disease of low activity.

Disclosure of Interest: None declared

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AB1041 OCCURRENCE OF MAJOR CARDIOVASCULAR EVENTS IN PATIENTS WITH GOUT TREATED WITH FEBUXOSTAT

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Background: Controversy persists regarding the use of febuxostat (FBX) in patients with gout and the development of cardiovascular (CV) events. In both APEX¹ and FACT² trials a higher risk was identified in those on the FBX arm compared to those on allopurinol, but this was later not confirmed in CONFIRMS trial³ and the extension phases. Recently, the FDA has published a warning on the risk of CV death in relation to FBX, based on preliminary data of a safety study enrolling 6000 participants.⁴

Objectives: To assess the occurrence of CV events in patients with gout after been prescribed with FBX in clinical practice.

Methods: Retrospective review of patients with crystal-proven gout enrolled in an inception cohort since January 2014. Epidemiological (age, gender), clinical (CV risk factors, CV disease background), and laboratory variables (serum urate – SU –, glomerular filtration rate – GFR) were registered. The primary endpoint was the occurrence of CV events (death, coronary heart disease (CHD), congestive heart failure (CHF), stroke, peripheral artery disease (PAP)) developed during treatment with FBX. A comparison on secondary study variables regarding the development of CV events was performed by Mann-Whitney's U, chi-square and Fisher's exact tests.

Results: In the cohort, 43 patients were treated with FBX, but three were excluded (two early stopped FBX because of rash, and one was lost of follow-up), so finally 40 patients were analysed. Their median age was 76 years (p25–p75 70–79), being 24 of them men (60%). CV risk factors were prevalent, especially hypertension (87.5%), and 20 of them (50%) had established CV disease. Median time since first gout attack was 1.5 years (p25–75 0.0–9.5) and 14 patients (35.0%) were tophaceous. After initiating FBX, 7 cases (17.5%, 95% CI 5%–30%) of CV events were identified: three of CHF (7.5%), two of CHD (5.0%) and one stroke (2.5%), with no PAP events. Five CV-related deaths (12.5%) were noted. The occurrence of CV events significantly associated with an older age and background of established CV disease (table 1).

Abstract AB1041 – Table 1

	No CV events	CV events	P
AGE*	74 (67–79)	80 (78.2–81.0)	0.049
HT*	28 (84.8%)	7 (100%)	0.565
DM*	14 (42.4%)	3 (42.9%)	1.000
DLP*	21 (63.6%)	4 (57.1%)	1.000
SMOKING*	12 (38.7%)	3 (42.9%)	0.711
PRIOR CV DISEASE*	13 (39.4%)	7 (100%)	0.008
BASELINE GFR*	37.4 (20.7–53.1)	28.0 (22.5–37.3)	0.530
BASELINE SU*	8.9 (7.7–10.7)	10.7 (8.4–14.6)	0.147
GOUT DURATION*	2.5 (0–10)	1 (0–8)	0.147
TOPHI*	12 (38.7%)	2 (40.0%)	1.000

*median (p25–75);+n(%)

Conclusions: In our cohort, about one on six patients treated with FBX suffered from a CV event, some being fatal. The development associated with older age and CV disease background, so it merits a cautious use in this setting, although whether these CV events are directly related to FBX needs further clarification.

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AB1042 PATHOLOGIC MUSCULOSKELETAL ULTRASOUND FINDINGS IN PATIENTS WITH CHRONIC KIDNEY DISEASE ON DIALYSIS- A PILOT CONTROLLED STUDY

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Background: There are numerous studies about the musculoskeletal abnormalities associated with dialysis, but most of them target osteoporosis and the bone metabolism. While this is, in fact, of great importance, we consider that the articular anomalies should also be taken into account. Because of the pain they cause and the quality of life impairment in patients already affected in this domain, suffering from depression or at its' edge.

Objectives: We aimed to detect the dialysis associated soft tissue abnormalities, using musculoskeletal ultrasound(MSUS) scanning of patients diagnosed with late-stage chronic kidney disease(CKD) on dialysis. In order to achieve this, we compared the data obtained from this group, to a control group of pre-dialysis late-stage CKD.

Methods: Over the last 8 months, we ran a prospective study including 102 patients. The study group included 52 patients with stage G5D (GFR <15 ml/min/1.73 m², on dialysis – hemodialysis (HD)/peritoneal dialysis (PD)), while the control group included 50 patients with stage G5 (GFR <15 ml/min/1.73 m², pre-dialysis). Each patient had 68 joints scanned with a Samsung HM70A machine, by the same ultrasonographer, in order to avoid the inter-observer variability. Also, each patient completed a visual analogue scale (VAS) for evaluating pain.

Sex study group: M: 30 (57.69%) F: 22 (42.3%)

Sex control group: M: 28 (56%) F: 22 (44%)

Age (years) study group: 62.52^{30–82}

Age (years) control group: 64.1 (33–84)

HD/PD study group: HD: 46 (88.46%) DP: 6 (11.53%)

Time on dialysis (years) study group: 6.41 (0.5–22)

Results: The findings included median nerve entrapment (71.1% – study group, 18% – control group), tendon calcifications (61.5% – study group, 38% – control group), degenerative abnormalities (57.6% – study group, 50% – control group), synovitis (32.6% – study group, 22% – control group) and tenosynovitis (13.4% – study group, 8% – control group). There were no particular abnormalities found only in the study group, but the percentages of the common findings were significantly higher.

The VAS results were split in three groups: low, moderate and high. Among the patients on dialysis, 46.1% declared a low VAS, 36.5% moderate and 17.3% a high VAS, while in the control group the distribution according to VAS was 46% in the low lot, 34% in the moderate and 20% in the high lot.

Conclusions: We detected soft tissue abnormalities in an important percentage of patients on dialysis, but the results were disproportionate to the algo-functional symptoms. We found a higher percentage of low VAS then we were expecting. Considering the results, we plan to continue our study, aiming to create a rehabilitation programme adapted to the needs of the dialysed patient.

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AB1043 THE CLINICAL PROFILE OF GOUT SIGNIFICANTLY DIFFERS BETWEEN MALE AND FEMALE

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Background: Gout, the most common type of inflammatory arthritis, is considered as a predominant male disease. Notwithstanding, there is an increased risk of gout in female after the menopause.

Objectives: Our objective was to assess differences in the clinical features between female and male patients.

Methods: Data of newly diagnosed gout patients attending the rheumatology out-patient clinics of one secondary and one tertiary i.e. university centre in the south of the Netherlands were used. We compared baseline characteristics of males and females regarding to demographics, BMI, presence of tophi, medication use (diuretics, prophylaxis of gout and uric acid lowering drugs), serum and urine concentration of uric acid and creatinine, and comorbidities. Additional, fractional excretion of uric acid (FEUa), calculated as (urinary uric acid x serum creatinine) / (serum uric acid x urinary creatinine), was compared. FEUa gives the percentage of uric acid renally filtered and thus excreted in the urine (normal range 7%–12%). Independent t-tests and chi square were used to assess differences between females and males statistically.

Results: 66 female (16.6%) and 331 male (83.4%) patients with gout (MSU crystals 60.6 vs 68.6%, respectively) were included. At baseline, females compared to males had a significantly higher age (73±12 vs 63±13 years, p<0.001), BMI (30.1 ±5.2 vs 28.7±4.7 kg/m², p=0.034) and diuretic use (63.6 vs 27.8%, p<0.001). Females had also a significantly higher percentage of comorbidities, including hypertension (77.3 vs 59.5%, p=0.003), diabetes (48.5 vs 22.7%, p<0.001) and chronic kidney disease (eGFR of 46.4±24.2 vs 62.5±22.9, p<0.001). There was no significantly difference in serum and urine uric acid concentration, current urate lowering and prophylactic medication, presence of tophi and nephrolithiasis. Also, the FEUa was similar in females vs males (5.1±3.0 vs 4.4%±1.7%, p=0.201).

Conclusions: The clinical profile of gout in females significantly differs compared with males: significantly older, more advanced decrease in renal function and higher prevalence of hypertension in the females. As Dutch guidelines recommend starting with a diuretic for the treatment of hypertension in patients aged 70 +; this may have a role in explaining the higher numbers of females using diuretics. The start of diuretics has previously been associated with hyperuricemia and increases the risk of gout in the female population. Although diuretic use has proven to be a safe and effective first-line treatment for hypertension, our results suggest that diuretic use in combination with a decreased renal function is associated with an increased risk at developing gout in females, and possibly needs reconsideration. Furthermore, despite the fact that the FEUa was similar distributed between genders, females did seem to have a lower urinary uric acid excretion. However, the number of patients with tophi and nephrolithiasis and the serum uric acid level are comparable between the genders. This suggests that the urate burden is similar but that the clinical profile for the development of gout differs due to the uric acid production vs excretion. In depth analysis of our population underlines the differences in female and male gout patients which highlight the need for more research into pathophysiology and management of gout between sexes.

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AB1044 THE EDUCATION OF PATIENTS WITH GOUT IMPROVES THE EFFECTS OF TREATMENT

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Background: The recent studies about gout demonstrated the correlation between gout and cardiovascular disease (CVD). The urate lowering therapy (ULT) ameliorates the outcomes of CVD. The poor adherence with ULT in patients with gout is the main obstacle. It is induced mainly due to a lack of adequate information about the efficacy of ULT.

Objectives: This study was performed to analyse the effects of the education for patients with gout.

Methods: 116 patients with gout were enrolled and categorised by two groups, education and non-education. The face to face education was conducted by the specially educated nurse. And all participants in two groups received an leaflet about general information of gout including lifestyle advice, nutrition and drugs of ULT. The patients in non-education group were also educated by nurse on their

second visit (after two or three month from first visit). The score of patients' satisfaction using the visual analogue scale (from 0 to 100 mm) and questionnaire about satisfaction and questionnaire of patients' knowledge about disease (gout) were assessed. And we analysed patients' serum uric acid level and drug compliance.

Results: A total of 116 patients were randomised to education or non-education group equally. Patients' satisfaction in visual analogue scale was significantly higher in education group (education group: 82.7±21.0 mm, vs. non-education group: 72.8±20.7 mm, p<0.001).

Patients' satisfaction questionnaire was significantly higher in education group (education group: 3.89±0.5, vs. non-education group: 3.69±0.4, p=0.017). The level of knowledge about gout was higher in education group (education group: 7.4±2.0, vs. non-education group: 6.2±2.3, p=0.004). The serum uric acid level on second visit is decreased after education (baseline: 5.97±1.93 mg/dL, vs. second visit: 5.32±1.35 mg/dL, p=0.001). Besides drug compliance on second visit is improved after education (baseline: 89.6%±16.4%, vs. second visit: 94.3%±9.9%, p=0.018).

Conclusions: The face to face education for gout improved the patients' satisfaction, drug adherence and serum uric acid level. The education is very important part in treatment of gout.

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AB1045 MICROPROTEINURIA AS A MARKER OF SUBCLINICAL GOUTY NEPHROPATHY

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Background: The prevalence of kidney damage in patients with gout ranges from 30% to 70%. Currently the concept of "gouty nephropathy" (GN) comprises all renal pathologies due to gout. There is no clear opinion whether hyperuricemia is a marker of renal dysfunction or risk factor. It is important to identify the early stages of GN as its course is subclinical for a long period of time. Microproteinuria is the first harbinger of kidney damage. However, predictors of GN have not been established for today.

Objectives: To establish predictors of GN.

Methods: A total of 103 patients with chronic gouty arthritis were examined in rheumatology department of Ternopil University Hospital. All patients had no history of any kidney disease. ELISA method was used to determine microproteins in urine. Subsequently, patients were divided into 2 groups: I (n=58) – patients with subclinical gouty nephropathy, abnormal microproteins level (56.3%), II (n=45) – control group, patients without kidney damage, normal microproteins level (43.7%). Statistical analysis was performed with STATISTICA software.

Results: Patients with subclinical gouty nephropathy had a higher prevalence of arterial hypertension and metabolic syndrome. The prevalence of osteoarthritis, diabetes mellitus and dyslipidemia was the same in both groups. Also, group I patients showed longer duration of the disease, greater radiologic changes, higher levels of hyperuricemia, tophi, work incapacity, greater number of affected joints and more frequent changes in urinalysis than the control group.

Conclusions: Formation of GN is asymptomatic, causing delays in early diagnosis, but can be suspended timely. Gouty nephropathy develops in 56.3% of patients with chronic gout arthritis, and manifests by microproteinuria in the early subclinical stages. Duration of the disease, obesity, presence of tophi, arterial hypertension, hyperuricemia, increased triglycerols and low-density lipoproteins levels were found to be predictors of gouty nephropathy.

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