Conclusion: RGE successfully suppressed MSU-induced acute inflammation in mouse model. Also, RGT reduced NLRP3 expression in intercritical gout patients. These results suggest that red ginseng can be implicated as a therapeutic agent for gout.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.3849

SAT0432 GOUTY ARTHRITIS AND DRUG-INDUCED LIVER INJURY AFTER THE TREATMENT WITH NSAIDS

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Background: In order to relieve the pain during acute gout attacks, most patients take high doses of nonsteroidal anti-inflammatory drugs (NSAIDs), which can provoke the hepatotoxicity, or DILI (drug-induced liver injury).

Objectives: To define the timing of DILI formation after the treatment with NSAIDs and its severity in patients with gouty arthritis (GA).

Methods: 738 patients with GA from our database who meet the criteria of the ACR (1977) were included into the study. NSAIDs-induced liver damage is known to be mainly hepatocellular. The dynamic ALT concentration in blood before the start of NSAIDs and during the treatment has been assessed. Hepatocellular toxicity was determined according to the DILI classification criteria based on the blood ALT level increased > 2 times to the upper limit of norm (42 U/l for men and 35 U/l for women). Inclusion criteria for the study group (n = 88) were: normal ALT before the treatment with NSAIDs, its increase during the treatment and return to the norm after the treatment.

Exclusion criterion was chronic hepatitis of any etiology. The comparison group (n = 650) consisted of patients with normal blood ALT level throughout the treatment.

Results: Among 738 patients with GA, 11.9% (n = 88) developed the hepatotoxicity following the NSAIDs therapy. No significant differences in age (54 (44-59.5) and 57 (52-63) years; p > 0.05) and gender (men 93.3% and 87.6%; p > 0.5) between the study and comparison groups were found. In the study group, the duration of NSAIDs administration was 10 (6-14) days, which did not differ from that in the comparison group — 9.5 (7-12) days (p > 0.05).

In patients with DILI, the elevated ALT was observed as follows: 2-3 times in 74 patients (84.1%); 3 to 5 times in 10 (11.4%); more than 5 times in 4 patients (4.5%). So, minimal cytolysis was presented more frequently than more severe forms (p < 0.05).

In the subgroup with the ALT concentration 3-5 times (n = 10), 6 patients received Diclofenac in high doses, 2 patients were treated with Nimesulide, 1 patient with Etodolac and 1 with Dexamethasone during the observation period.

The elevation of ALT concentration 5 times was observed in 3 patients taking Diclofenac i/m and Nimesulide per os, simultaneously, and in 1 patient taking Diclofenac in high doses.

Patients with DILI were taking the following medications: Diclofenac 48.9% (n = 43); Nimesulide 18.2% (n = 16); Meloxicam 5.7% (n = 5),

the combination of NSAIDs 20.5% (n = 18) without statistical differences (p > 0.05).

The number of patients who abused alcohol in DILI and control groups did not differ significantly — 53.4% and 48.2%, respectively (p > 0.05).

Conclusion: In patients with GA, the hepatocellular DILI was observed in 11.9% cases after the treatment with NSAIDs during 10 days (from 6 to 14 days). Among patients with DILI, 84.1% (n = 74) had NSAIDs-induced hepatitis with minimal cytolysis. Mild cytolysis was seen in 10 (11.4%), moderate in 4 patients (4.5%). In our study, no severe or fatal DILI has been noted. No significant differences for particular drugs in the hepatotoxicity incidence have been found (p > 0.05).

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.4341

SAT0433 AN ANALYSIS OF PRESCRIPTION RECORDS OF GOUT PATIENTS IN EUROPE: EVIDENCE OF SUBOPTIMAL MANAGEMENT AND CLINICAL INERTIA

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Background: Urate-lowering therapy (ULT) should be prescribed to people with recurrent gout flares and tophi, and offered to people with first-onset gout. Despite effective drugs, gout flares are common. Reasons for this include lack of prescription of ULT, under-dosing of ULT by physicians (clinical inertia), and poor adherence to ULT.

Objectives: To ascertain the quality of gout care delivered by general practitioners (GPs), prescribing patterns for ULT were analysed in 4 western European countries.

Methods: Data for this retrospective study were obtained from IQVIA's Real-World Data Longitudinal Prescription databases of GPs from France, Italy, Spain and United Kingdom (UK). The databases contain anonymised patient prescription records, including demographics, dispensing details (pharmacy, prescription date), and medication (name, dose, therapy duration). Data for patients with gout with or w/o ULT were analysed from July 2015 to June 2016.

Results: Crude prevalence of gout was 0.7% (UK) to 1.1% (France, Italy, and Spain) [Table 1]. Only about half (France, Italy, UK) to 2/3 (Spain) of diagnosed patients were on ULT. Between 19.9% (France) and 56.4% (Spain) of people on ULT had serum urate (sUA) measurements recorded within the year. Only 26.6% (Italy) to 45.6% (France) of patients with a recorded sUA level were at target (<6.0 mg/dL). The most common 1st-line treatment was allopurinol (ALLO), almost always at a dose ≤300 mg/d. Febuxostat (FBX) was prescribed as a 1st-line alternative in France and Italy. Switch to 2nd-line ULT, such as FBX, was uncommon, especially in Spain and UK. Uricosurics in monotherapy were not used. Average time on ULT ranged from 57.3% (Italy) to 72.6% (France) of the assessment year. At least one comorbidity (CM) was present in >78% of patients, the most common being hypertension, dyslipidemia, diabetes, chronic kidney disease, and obesity.

Conclusion: In the study period, management of patients with gout in 4 EU countries was suboptimal. Nearly half of diagnosed patients were not prescribed ULT. sUA levels were not being monitored regularly and mean sUA levels were above target. ALLO as the most common 1st-line ULT was generally prescribed at sub-therapeutic doses. Initiation of 2nd-line therapy was infrequent indicating a status quo and/or other reasons and medication adherence was poor indicating low patient self-management

and/or low monitoring by GPs. Early treatment was not being initiated despite a high prevalence of CMs. Efforts must be undertaken to improve gout management, avoid clinical inertia, and reduce the individual and societal burden of gout.

Table 1. Prescribing information for patients with a diagnosis of gout who were receiving anti-gout treatment (M04A chronic therapy; *based upon 2016 statistics).

	France	Italy	Spain	UK
Total diagnosed patients, n	736,352	642,063	523,592	441,505
Crude prevalence* (%)	1.1	1.1	1.1	0.7
Treated patients, n (%)	397,689 (54.0)	311,688 (48.5)	365,030 (69.7)	244,899 (55.5)
sUA measurement recorded in the year (%)	19.9	56.4	39.5	40.3
Mean sUA, mg/dL	6.5	8.1	6.7	6.5
Achieved sUA goal (among patients with sUA measurement recorded in the year) (%)				
<6.0 mg/dL	45.6	26.6	37.9	41.9
≥6.0 – <9.0 mg/dL	44.4	47.8	47.2	50.3
≥9.0 mg/dL	9.9	25.6	14.8	7.7
Treatment (%)				
Allopurinol	57.4	6.5	23.4	23.0
<300mg	15.7	43.9	15.3	13.2
300mg	0.5	0.1	0.1	2.8
>300mg				
Febuxostat	28.2	14.2	1.0	2.0
Second-line treatment (%)	15.9	13.4	1.9	4.3
Average days on treatment, n	265	209	218	247
Comorbidities present (%)	86.1	93.6	96.8	78.8

Disclosure of Interests: Frederic Lioté Grant/research support from: institutional grants from Grunenthal, Ipsen Pharma/Menarini, Novartis, SOBI for the European Crystal Network Workshops, Consultant for: Grunenthal, Novartis, Ravi Karra Employee of: Grunenthal, Prashanth Kandaswamy Employee of: Grunenthal, Abhishek Abhishek Grant/research support from: AstraZeneca and Oxford Immunotech, Grant/research support from: AstraZeneca and Oxford Immunotech, Speakers bureau: Menarini pharmaceuticals, Speakers bureau: Menarini pharmaceuticals, Carlo Alberto Scirè: None declared, Fernando Perez-Ruiz Grant/research support from: Cruces Rheumatology Association, Consultant for: Grunenthal, Menarini, Horizon, Speakers bureau: Menarini, Grunenthal; Spanish foundation for rheumatology
DOI: 10.1136/annrheumdis-2019-eular.2868

SAT0434 A TRANSIENT DECREASE IN SERUM URATE CHANGES THE CLINICAL TRAJECTORY OF SUBJECTS WITH ADVANCED GOUT

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Background: The standard approach to monitor subjects with gout is to measure serum urate. The assumption is that the signs and symptoms of disease will improve if serum urate is maintained below the target level of 6 mg/dL. However, there has been little emphasis on whether lowering urate transiently would have a prolonged impact on the clinical manifestations of advanced gout.

Objectives: Assess the clinical benefit in patients with advanced gout who had transient lowering of serum urate resulting from treatment with pegloticase, a pegylated recombinant uricase.

Methods: A post hoc analysis was carried out using the results from two randomized controlled trials (RCTs) of 6 months duration to assess the efficacy of treatment with 8 mg of pegloticase every 2 weeks (q2w)¹. Serum urate was measured before each infusion and the serum urate area under the curve (AUC) was calculated as described² for the first and second three-month periods of time in the RCTs. The following clinical outcomes were assessed: gout flares, tophus reduction, patient global assessment (PtGA), tender and swollen joints (TJC and SJC), pain measured with a 100-mm visual analog scale (VAS) and a variety of patient

reported outcomes (36-Item Short Form Health Survey [SF-36] Physical Component Score [PCS] and Arthritis-Specific Health Index Score [ASHIS]).

Results: The analysis included 85 subjects treated with q2w pegloticase and 43 patients who received placebo. Of the 85 pegloticase-treated subjects, 49 had only a transient decrease in serum urate owing to the development of anti-pegloticase antibodies. The mean length of time these subjects experienced a serum urate <6 mg/dL was approximately 6 weeks³. Despite the transient reduction in serum urate, the serum urate AUC for the first and second 3 months of the RCTs was significantly (p=0.008) decreased compared to placebo-treated subjects. However, it was significantly (p<0.0001) less reduced compared with those with persistent urate lowering throughout the 6 month RCTs (Table 1). Results for both the subjects with persistent and transient lowering of serum urate to <6 mg/dL indicated significant reduction in tophi and improvements from baseline in PtGA, TJC, SJC, pain, and ASHIS after 6 months of the RCT. No significant improvements were observed in the patients who received placebo.

Table 1 Serum Urate Area Under the Curve in Subjects Treated with Pegloticase or Placebo

Treatment	Mean (± SD) Serum Urate Area Under the Curve (mg/dL-hr)	
	Month 0-3	Month 3-6
Placebo	21,093.0±3,990.1	16,665.8±3,462.0
Transient Responders	14,361.2±8,517.3	14,373.1±9,218.2
Persistent Responders	2,540.1±2,132.8	338.9±1,137.9

Transient responders versus placebo, first 3 months, p<0.0001, second 3 months, p=0.008
Persistent responders versus placebo for months 0-3 and months 3-6, p<0.0001
Persistent responders versus transient responders for months 0-3 and months 3-6, p<0.0001

Conclusion: A transient reduction in serum urate resulting from pegloticase therapy can result in significant clinical benefit lasting through the 6 months of the RCTs. These results suggest that transient lowering of urate can alter the trajectory of the clinical manifestations of advanced gout. Moreover, estimates of serum urate AUC may be more helpful in assessing the impact of urate lowering therapy than individual measurements of serum urate.

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Disclosure of Interests: Michael H. Pillinger Consultant for: Horizon Pharma, SOBI, Theodore Fields Consultant for: Horizon Pharma, Anthony Yeo Employee of: Horizon Pharma, Peter Lipsky Consultant for: Consulting fees from Horizon Pharma

DOI: 10.1136/annrheumdis-2019-eular.2905

SAT0435 MANAGEMENT OF ADVANCED GOUT: A CLAIMS-BASED ANALYSIS FROM THE UNITED STATES

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Background: Gout is one of the most common inflammatory arthropathies. Despite available urate lowering therapies (ULT), many patients progress to chronic or advanced gout, characterized by the development of tophi, chronic inflammatory arthritis, and other manifestations resulting from persistent urate deposition. While numerous guidelines exist for the management of gout, there is little information on the frequency of their implementation, especially in patients with advanced gout.

Objectives: To evaluate the real-world practice patterns in patients diagnosed with advanced gout using a large administrative claims database from the United States.