SAT0367

PATIENTS HOSPITALISED WITH GOUT AS MAIN DIAGNOSIS: COSTS AND EFFICIENCY ACCORDING TO HOSPITAL DEPARTMENTS

M. Hernández Hurtado¹, M. Á. Martínez Huedo², A. Balsa Criado³, D. Peiteado López³, E. De Miguel Mendieta³. ¹Medical Student, Universidad Autónoma de Madrid; ²Teaching and investigation unit., Hospital Universitario La Paz;

³Rheumatology Department, Hospital Universitario La Paz-IdiPaz, Madrid, Spain

Background: Gout is the most common inflammatory articular disease in adults concerning a 1%–2% of the general population, and even a 4%–5% in older than 70 years. Recently, it has been reported an increase of the prevalence of gout, especially in developed countries.

Objectives: The main objective of this study is to describe the clinical and epidemiological characteristics of gout hospitalised patients in Spain (as the main reason of admission) and the economic outcomes of its management by the main care departments in charge when this disease is the principal diagnosis.

Methods: The main objective of this study is to describe the clinical and epidemiological characteristics of gout hospitalised patients in Spain (as the main reason of admission) and the economic outcomes of its management by the main care departments in charge when this disease is the principal diagnosis.

Results: From the whole 192.037 patients we have with gout diagnosis we performed a sub-analysis of 10.512 patients with gout as the main cause of hospitalisation, from which the 85.9% are males. The admission number for this cause has remained constant or with a slight increase, with an average of 956 patients per year (equivalent to a 5.5% of gout total admissions). The average male age was 64.02 years (standard deviation (SD) 14.43) and 73.9 years (SD 13.69) for women ($p < 0.001$). When comparing patients with gout as main cause of admission against patients hospitalised by other causes, with gout as a secondary diagnosis. The former ones showed a significant lower percentage of comorbidities (type 2 diabetes, congestive heart failure, acute myocardial infarction and cerebrovascular disease).

Regarding the average of hospital stay of these patients, it was 6.71 ± 6.8 days with an average cost of 3471 $\pm$ 2678 €. Three medical specialties (Internal Medicine with 3852 hospital admissions (36.6%), Rheumatology with 2600 (24.7%) and Traumatology with 2033 (19.3%)), attended to an 80.6% of the total gout patients as main diagnosis for admission. It was noticed that the hospital stay was lower in the Traumatology Department with an average of 4.85 ± 6.78 days compared with the Rheumatology and Internal Medicine departments, which had an average of 6.52 ± 5.65 days and 7.76 ± 6.83 days respectively. However, it was found the lowest cost in the Rheumatology Department, with an average of 2892 €.

Abstract SAT0367 – Table 1. Average stay and costs by clinical departments: in gout as main diagnosis hospitalised patients.

	Internal Medicine	Rheumatology	Traumatology
Number (%)	3852 (36.6%)	2600 (24.7%)	2033 (19.3%)
Average hospital (SD) days	7.76 (6.83)	6.52 (5.65)	4.85 (6.78)
Cost (SD) €	3549 (1796)	2892 (1806)	3715 (2541)

SD=standard deviation

Conclusions: Only 24.7% of hospitalised patients with gout as main diagnosis are attended by Rheumatology Departments. However, Rheumatology was the most efficient clinical department in the care of this pathology. This conclusion should be considered in order to improve the management of gout in the health system

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.7566

SAT0368

ROLE OF JOINT ULTRASONOGRAPHY IN PATIENTS WITH GOUT STARTING TREATMENT WITH FEBUXOSTAT

M. Novella-Navarro¹, J.L. Cabrera-Alarcón², E. Calvo-Aranda¹, T. Rodríguez-Araya¹, J.-J. González-Martín¹, P. Alcocer-Amores¹, F. Aramburu-Muñoz¹, C. Marín-Huertas¹, A. Gómez-Gómez¹, I. Amil-Casas¹, C. Vergara-Dangond¹, M. Valero-Expósito¹, S. Rodríguez-Rubio¹, P. García de la Peña-Lefebvre¹.

¹Rheumatology, Hospital Universitario Madrid Norte Sanchinarro; ²Bionformatics, Molecular Biology Center, Severo Ochoa, Madrid, Spain

Background: Gout is the most prevalent arthritis globally, it is due to monosodium urate (MSU) crystals deposit on tissues, mainly in joints and periarticular structures. Although the main clinical pattern in gout is monoarticular, many patients suffer from oligo/polyarticular disease. Due to the information obtained

through imaging tests such as ultrasonography (US), we know that the extent of MSU deposits are greater than we expected in many occasions, affecting clinically silent joints. Musculoskeletal US is a key tool due to its accessibility and safety, it determines accurately the current extent of deposits and joint involvement in gout, which may condition therapeutic changes.

Objectives: To evaluate the influence of articular US for clinical practice in Rheumatology when initiating treatment with febuxostat in patients with gout, determining the degree of crystalline deposit and articular ultrasonographic involvement.

Methods: Observational cross-sectional study of 129 patients diagnosed with gout (ACR criteria), treated with febuxostat (14 due to renal disease, adverse reaction/intolerance to allopurinol, and 115 due to non-response to allopurinol). One month after the onset of treatment, US examination was performed following the protocol proposed by Peiteado *et al*¹, determining the number of joints with signs of gout (double contour, hyperechoic aggregates) and acute inflammatory activity (Doppler). Other variables were analysed: age, sex, hypertension, diabetes, dyslipidemia, chronic kidney disease, time of disease evolution and clinical pattern of joint involvement.

Results: 115 patients with febuxostat (112 men and 3 women), with a mean age of 57 ± 13 years and mean of disease evolution 14 ± 10 years. 59 patients had monoarticular clinical pattern, 46 oligoarticular and 10 polyarticular. US involvement: we observed acute inflammatory activity by Doppler in 47 patients (40.86%), microcrystalline aggregates in 90 patients (78.26%) and double contour sign in 53 patients (42.08%). The mean uricemia at the time of the joint ultrasound examination was 7.4 ± 1.8 mg/dl. Of the 94 patients with uric acid levels > 6 mg/dl, 72 presented extensive US involvement (76.59%), whereas of the 21 patients with levels ≤ 6 mg/dl, US involvement was observed in 18 (85.71%). From the observed variables, none was a risk predictor for joint involvement in binomial logistic regression model. Uricemia presented OR=0.83 CI (0.6–1.1)

Conclusions: US quantification of MSU deposits can significantly condition the intensity of uricemia-reducing treatment regardless of serum uric acid levels. In this study, patients with non-target uricemia did not present a greater joint affection evaluated by US, however, those with < 6 mg/dl, did present more affection than might be expected. US examination of joints allows a more precise individualization of the treatment in gout and should be incorporated to the periodic evaluation of these patients to optimise their prognosis

REFERENCE:

- Peiteado D, et al. Value of a short four-joint ultrasound test for gout diagnosis: a pilot study. Clin Exp Rheumatol 2012;30:830–7.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.1700

SAT0369

COMPARISON OF RISK FACTORS FOR CARDIOVASCULAR DISEASES IN PTS WITH CPPD GOUT AND OSTEOARTHRITIS

S. Vladimirov, M. Eliseev, O. Zhelyabina, M. Chikina. V. A. Nasonova Research Institute of Rheumatology, Moscow, Russian Federation

Background: The data on rates of comorbidities and risk factors for cardiovascular disease in CPPD is insufficient.

Objectives: To compare the rates of cardiovascular diseases, risk factors and the risk of death from cardiovascular disease in pts with CPPD, OA and gout.

Methods: The study included 488 patients: 232 CPPD (111 m and 121 f) pts, 60 OA (19 m and 41 f) pts and 196 (169 m and 27 f) gout pts. The OA diagnosis was established based on ACR criteria, the CPPD diagnosis – on McCarty criteria, and gout diagnosis – on the detection of monosodium urate crystals in synovial fluid. The mean age in CPPD pts was 57.6 ± 18.2 y., OA pts – 57.5 ± 8.5 y., and gout pts – 52.7 ± 12.2 y. Serum levels of cholesterol, glucose, uric acid, and hsCRP were obtained in all pts, and thorough evaluation for cardiovascular diseases was performed as well as including SCORE (Systematic Coronary Risk Evaluation) scale assessment. Statistica 10.0, and Biostatistics were used for statistical data processing. Differences were considered to be statistically significant at $p < 0.05$.

Results: Obtained data are presented in table 1. High or very high risk of cardiovascular death (SCORE scale) was identified in 47.8% of CPPD pts, was comparable to that in gout pts (48.9%) and exceeded the same in OA pts (33%) ($p < 0.05$). Higher probability of myocardial infarction (MI), chronic heart failure (CHF), chronic kidney disease stage ≥ 2 (CKD) and higher mean serum CRP levels were established in CPPD and gout patients as compared to OA pts. There was no difference in rates of stroke, thrombosis, arterial hypertension (AH), ischaemic disease (ICD), diabetes mellitus (DM 2), or in average glucose and cholesterol levels between CPPD, OA and gout pts. Average serum levels of uric acid were higher in patients with gout.

Abstract SAT0369 – Table 1. Comparative rates of cardiovascular diseases, risk factors and SCORE values in patients with CPPD, gout and OA

Parameter	CPPD (n=232)	Gout (n=196)	OA (n=60)
hsCRP, mg/l	16.1±8.43*	34.3±24.8***	4.2±2.18
UA, µmol/l	350.8 ±115.8	504.0±136.8**	313.0 ±71.4
Glucose, mmol/l	5.3±1.2	6.1±1.21	4.3±1.2
Cholesterol, mmol/l	6.1±1.17	5.44±1.19	5.1±1.14
AH, n (%)	145 (62.5)	144 (73.4)	41 (68.3)
ICD, n (%)	64 (27.6)	38 (19.3)	21 (35.0)
CHF, n (%)	27 (11.6)*	16 (8.1)*	3 (5.0)
MI, n (%)	9 (3.8)*	13 (8.1)*	0
Stroke, n (%)	2 (0.8)	13 (8.1)	5 (8.3)
Thrombosis, n (%)	9 (3.8)	2 (1.0)	3 (5.0)
CKD≥2 stage, n (%)	17 (7.3)*	28 (14.3)*	0
DM 2, n (%)	24 (10.3)	36 (18.3)	12 (20.0)
SCORE, (%)	5.37±4.29	5.17±4.54	4.58±3.99
High and very high SCORE values (>5%), n (%)	111 (47.8)*	96 (48.9)*	20 (33.3)

*p<0.05 between CPPD and OA; gout and OA, **p<0.05 between CPPD and gout

Conclusions: Cardiovascular risk in CPPD pts may be underestimated and suggests the need for further research.**Disclosure of Interest:** None declared

DOI: 10.1136/annrheumdis-2018-eular.5693

SAT0370

ASSOCIATION OF RENAL DYSFUNCTION AND DEVELOPMENT OF TOPHI IN SUBJECTS WITH CHRONIC REFRACTORY GOUT AND RESPONSE TO TREATMENT WITH PEGLOTICASEN.L. Edwards¹, J. Singh², O. Troum³, A. Yeo⁴, P. Lipsky⁵. ¹University of Florida, Gainesville; ²University of Alabama at Birmingham, Birmingham; ³University of Southern California, Los Angeles; ⁴Horizon Pharma, Lake Forest; ⁵AMPEL BioSolutions LLC, Charlottesville, USA**Background:** Many, but not all patients with chronic refractory gout develop tophi; and the factors that govern tophus formation are not known. To address this question, we assessed subjects enrolled in the pivotal trials of pegloticase, a mammalian recombinant uricase conjugated to polyethylene glycol that is approved for the treatment of gout refractory to conventional oral urate lowering therapy.**Objectives:** To determine the factors associated with the presence of tophi in patients with chronic refractory gout.**Methods:** This analysis used results from two pivotal randomised controlled trials (RCTs)^{1,2} to assess the clinical characteristics of subjects with chronic refractory gout and effects of treatment with pegloticase. Overall, 73% of the subjects in these trials had clinically apparent tophi at baseline and 27% did not. Demographic features of these subjects were assessed and renal function was evaluated by measurement of estimated glomerular filtration rate (eGFR). Subjects were treated with pegloticase, 8 mg every other week (q2w) in a 6 month RCT and then followed for up to 3 years in an open label extension (OLE).**Results:** The analysis included subjects with chronic refractory gout, 154 with tophi at baseline and 57 without tophi. Chronic refractory gout subjects in the two groups were generally similar at baseline, but with a difference in disease duration: 16.3 years for tophaceous subjects vs 11.7 years for subjects without tophi (p=0.007). There were no significant differences in most comorbidities for the two groups. However, eGFR was significantly lower in the subjects with tophi (85.2 mL/min) vs those without tophi (116.5 mL/min) (p=0.001). The frequency of tophi increased in subjects with lower eGFR values (Table). Six months of treatment with pegloticase (8 mg q2w) in a subgroup of subjects resulted in complete or partial resolution of at least one tophus with no increase in others in 74% of subjects, but had no significant effect on renal function measured by eGFR (78.8 mL/min vs 84.2 mL/min, n=51, p=0.7). Continued treatment with pegloticase in the OLE further decreased the burden of tophi, but had no significant effect on renal function measured by eGFR (75.7 mL/min, p=0.6).**Abstract SAT0370 – Table 1**

Baseline eGFR (mL/min)	Non-tophaceous (n=57)	Tophaceous (n=154)
≥90 (n=97)	33 (34.0%)	64 (66.0%)
60 to <90 (n=54)	16 (29.6%)	38 (70.4%)
30 to <60 (n=43)	5 (11.6%)	38 (88.4%)
15 to <30 (n=17)	3 (17.6%)	14 (82.4%)

p=0.0094, Cochran-Mantel-Haenszel chi square test

Conclusions: These results indicate that chronic refractory gout patients may present with or without clinically apparent tophi. A significant association was

noted between the presence of renal dysfunction measured by eGFR and the frequency with which chronic refractory gout patients manifested tophi. Pegloticase treatment markedly decreased the tophus burden, but in this analysis did not improve renal function. These results suggest that renal failure may predispose patients to tophus formation, whereas the resolution of tophi in this analysis did not appear to improve renal function.

REFERENCES:

- [1] Sundy JS, Baraf HS, Yood RA, et al. JAMA 2011;306:711–720.
- [2] Baraf HS, Becker MA, Gutierrez-Urena SR, et al. Arthritis Res Ther 2013;15:R137.

Disclosure of Interest: N. L. Edwards Consultant for: AstraZeneca, Horizon Pharma, Ironwood Pharmaceuticals, SOBI International, J. Singh: None declared, O. Troum Shareholder of: Theralogix, Grant/research support from: Abbvie, Amgen, CORONA, Novartis, Pfizer, R-Pharm, Consultant for: Abbvie, Amgen, BMS, Pfizer, Roche, Genentech, Speakers bureau: Abbvie, Amgen, BMS, Celgene, Novartis, Pfizer, Roche, Genentech, A. Yeo Consultant for: Horizon Pharma, P. Lipsky Consultant for: Horizon Pharma

DOI: 10.1136/annrheumdis-2018-eular.5666

SAT0371

FACTORS ASSOCIATED WITH ALLOPURINOL ADHERENCE AND TREATMENT OUTCOME AMONG GOUT PATIENTS

S. Asaiphaniit, P. Narongroeknawin. Internal Medicine, Phramongkutklao Hospital, Bangkok, Thailand

Background: A serum uric acid (SUA) level of <6.0 mg/dL has been widely accepted as the therapeutic target for patients with gout. Recent studies implicate allopurinol nonadherence as a major barrier to achieving this target. However, factors that could affect this medication adherence are not clearly identified.**Objectives:** To identify factors associated with allopurinol adherence and SUA goal attainment in gout patients.**Methods:** This study identified patients aged 18 years or older with a diagnosis of gout by 1977 ARA classification criteria for gout, received at least 1 month of allopurinol, and attended out-patient clinics of Phramongkutklao hospital from Jul 2016–Sep 2017. Allopurinol adherence was defined as Medication Taking Behaviour for Thai patient (MTB-Thai) scores>21 points. Patient characteristics, comorbidities, concomitant medications, prescriber specialty, number of gout attack and SUA were examined. Multivariate logistic regression was used to examine factors associated with allopurinol adherence and SUA target, defined as SUA <6.0 mg/dL.**Results:** A total of 226 patients with gout was included. Approximately half of patients (43.4%) were adherent, whereas only one-third of them achieved SUA target (29.2%). Factors associated with allopurinol adherence in the multivariate analysis included disease duration (>1 year) (odds ratio [OR] 0.1, 95% confident interval [CI]: 0.05–0.21), history of gout attack (>2 times/year) (OR 0.14, 95% CI: 0.08–0.27), and prescriber specialty (rheumatologist) (OR 2.64, 95% CI: 1.28–5.43). Factors associated achieved SUA goal in the multivariable analysis included history of gout attack (>2 times/year) (OR 0.21, 95% CI: 0.1–0.42), prescriber specialty (rheumatologist) (OR 2.01, 95% CI: 1.31–4.13), allopurinol dose escalation (OR 2.11, 95% CI: 1.17–3.79), current allopurinol dosage (>100 mg/day) (OR 2.02, 95% CI: 1.11–3.65), and allopurinol adherence (OR 13.6, 95% CI: 6.52–28.39).**Conclusions:** Among patients with gout receiving allopurinol in our study, 70.8% did not reach the SUA goal and 56.6% of patients were non-adherent. Allopurinol adherence was strongly associated with SUA goal attainment. The only modifiable factor associated with allopurinol adherence was prescriber specialty, whereas, modifiable factors associated with SUA goal attainment were prescriber specialty, allopurinol dose escalation, and current allopurinol dosage. Appropriate dose escalation and rheumatology referral could be important factors to consider in efforts aimed at optimising gout treatment outcomes.**Disclosure of Interest:** None declared

DOI: 10.1136/annrheumdis-2018-eular.2252