§ Number of PT with a target tophus at baseline was small. # Wilcoxon test with H0: Mean ranks in categories are equal

Abstract FRI0235 – Table 2. Mean sUA at M6 and 12 by occurrence of GF and GFRT

Mean sUA mg/dL (95% CI) M6	p-value#	Mean sUA (95% CI) M12	p-value#
GF Yes	5.94 (5.80–6.07)	5.92 (5.79–6.06)	
GF No	5.71 (5.51–5.92)	5.91 (5.64–6.17)	
Difference	0.22 (–0.01–0.47)	0.01 (–0.28–0.31)	0.91
GFRT No	5.91 (5.79–6.03)	5.93 (5.80–6.05)	
GFRT Yes	5.530 (5.23–5.83)	5.83 (5.41–6.25)	
Difference	0.38 (0.06–0.71)	0.09 (–0.34–0.53)	0.65

T-test with H0: No difference in means

Conclusions: These results confirm that sUA on target <5–6 mg/dl is essential for TR, and longer the control better the TR. The lower mean sUA levels for PT with GF and GFRT was observed at M6 and not at M12, maybe owing to the fact that flares are common during the first months of ULT initiation and then taper off and urate deposits were more fragile and not completely dissolved. Also M6 and 12 may not be optimal to observe statistically significant differences between treatments with respect to TR, GF and GFRT.

REFERENCES:

- [1] Richette P, et al. *Ann Rheum Dis* 2017;76:29–42.
- [2] Qaseem A, et al. *Ann Intern Med* 2017;166(1):58–68.
- [3] Saag KG, et al. *Arthritis Rheumatol* 2017;69:203–12.
- [4] Bardin T, et al. *Ann Rheum Dis* 2017;76:811–20.

Disclosure of Interest: F. Perez-Ruiz Consultant for: Grünenthal, Menarini, Speakers bureau: Grünenthal, Menarini, P. Richette Consultant for: Grünenthal, Speakers bureau: Grünenthal, R. Karra Employee of: Grünenthal, I. Wild Employee of: Grünenthal, H. Hagedorn Employee of: Grünenthal, P. Kandaswamy Employee of: Grünenthal, T. Bardin Consultant for: Grünenthal

DOI: 10.1136/annrheumdis-2018-eular.5565

FRI0236

ASSOCIATIONS BETWEEN COMORBIDITY AND URATE DEPOSITION IN SUBJECTS WITH ASYMPTOMATIC HYPERURICEMIA: A PILOT STUDY

G. Kerr^{1,2}, S. Dowell³, A. Wells⁴, R. Haddad⁵, P. DeMarco^{2,6}, J. Joseph^{2,7}, J. Ude¹, S. Hochberg¹, J. Huang⁸, D. Nashel^{2,7}. ¹VAMC/HUH; ²Georgetown University Hospital; ³Howard University, Washington; ⁴Rheumatology/Immunotherapy, Franklin; ⁵The Hospital for Special Surgery, New York; ⁶Arthritis and Rheumatism Associates, PC, Wheaton; ⁷VAMC; ⁸MedStar Health Research Institute, Washington, USA

Background: Hyperuricemia is common and along with comorbidities, is increasing in prevalence. Though often asymptomatic and hence, under diagnosed, it may be associated with subclinical urate deposition. Ultrasound (US) imaging can detect urate deposition in individuals with asymptomatic hyperuricemia (ASU).

Objectives: To evaluate the association of comorbidities with urate deposition via US in ASU.

Methods: ASU was defined as serum urate (sUA) >6 mg/dl; sUA <6 mg/dl served as controls. Demographic (age, gender, BMI), comorbidity (CM – [hypertension (HTN), hyperlipidemia (HLD), diabetes mellitus (DM), cardiovascular (CVD) and renal disease (CKD)], diuretic/aspirin use, dietary data (alcohol, red meat, seafood) were collected. Ultrasonography (US) of joints (knee/MTP), tendons (triceps, quadriceps/patella, Achilles) was performed via standard procedure, OMERACT parameters of urate deposition documented, and images read by an Expert ultrasonographer blinded to sUA category. Correlations between sUA levels and MSK urate deposition with comorbidities, medication and dietary risk factors were analysed by 2-stage multivariable logistic regression model with propensity score weighting.

Results: Of 95 predominantly non-Hispanic Blacks (mean age 59.7 years, BMI ~32 kg/m²), ASU subjects (n=71, median sUA=8.0) were older men, with more frequent HTN, CVD, CKD, alcohol ingestion versus controls. In multivariate analyses adjusting for demographic characteristics, BMI, CKD, and alcohol use were positively associated with sUA >6 mg/dl; while HTN, CVD, and CKD were positively associated with sUA >8 mg/dl. Adjusting for comorbidities, sUA >8 mg/dl was significantly associated with urate deposition at knee (OR=3.20; p=0.03), quadriceps and Achilles tendons (OR=4.14; p<0.01), OR=9.51; p<0.01, respectively) but not at 1 st MTP (OR=2.14; p=0.06). A sUA >6 mg/dl alone, however, did not predict urate deposition.

Conclusions: Presence of HTN, CVD and CKD are associated with higher levels of sUA and increases the risk of urate deposition in ASU patients. Identifying a subset of ASU patients that may benefit from urate lowering therapy requires

further stratification and long term follow up for incident gouty arthritis in order to alter current urate lowering treatment guidelines.

Disclosure of Interest: G. Kerr Grant/research support from: Ardea, Grünenthal, Horizon, S. Dowell Grant/research support from: Horizon, A. Wells: None declared, R. Haddad: None declared, P. DeMarco: None declared, J. Joseph: None declared, J. Ude: None declared, S. Hochberg: None declared, J. Huang: None declared, D. Nashel: None declared

DOI: 10.1136/annrheumdis-2018-eular.2959

FRI0237

PEGLOTICASE TREATMENT SIGNIFICANTLY DECREASES MEAN ARTERIAL BLOOD PRESSURE IN PATIENTS WITH CHRONIC GOUT

H. Choi¹, R. Johnson², A. Yeo³, P. Lipsky⁴. ¹Massachusetts General Hospital, Boston; ²University of Colorado, Aurora; ³Horizon Pharma, Lake Forest; ⁴AMPEL BioSolutions LLC, Charlottesville, USA

Background: There are significant correlations between serum uric acid (sUA) and blood pressure (BP) in individuals with and without gout.¹ Limited data suggest that lowering sUA may decrease BP², but no consistent effect has been noted.³ Recent guidelines suggest the need for more aggressive management of increased BP.⁴

Objectives: To determine the impact of persistent, very low sUA levels on BP in subjects with chronic refractory gout treated with pegloticase, a recombinant uricase conjugated to polyethylene glycol approved for chronic refractory gout that decreases sUA to <1 mg/dL.

Methods: This analysis used results from two, 6 month randomised clinical trials (RCTs) in which subjects were treated with 8 mg pegloticase every 2 or 4 weeks (q2w or q4w) or placebo.⁵ sUA responders maintained sUA <6 mg/dL.⁵ Sitting BP was measured at each visit and estimated glomerular filtration rate (eGFR) was determined at baseline and after 3 and 6 months.

Results: Serial BP measures were obtained in 173 subjects during the course of the RCTs. Significant reductions in mean arterial pressure (MAP) from baseline to 6 months were noted in q2w responders (p=0.0029) (figure 1), whereas reductions in MAP in other groups were not significant. Notably, 18/29 (62.1%) of q2w sUA responders experienced persistent reductions in MAP (p=0.01 compared to other groups). Changes in both systolic and diastolic BP paralleled the change in MAP. Of the q2w sUA responders exhibiting persistent decreases in MAP, there were no significant differences in baseline age, gender, race, body mass index, history of hypertension, gout duration, MAP, sUA, cholesterol, eGFR, or urinary UA/creatinine ratio compared with those who did not lower MAP. There were no significant changes in eGFR in sUA responders to pegloticase treatment over the course of the study and there was no significant correlation between change from baseline MAP and eGFR in these subjects (p=0.43).

Abstract FRI0237 – Figure 1. *Significantly different from baseline (GLM adjusted for multiple comparisons)

Conclusions: Responders to biweekly pegloticase experienced significant reductions in MAP that were independent of changes in renal function.

REFERENCES:

- [1] Lee JJ, et al. *J Clin Hyperten* 2013;15:435.
- [2] Agarwal V, et al. *J Clin Hyperten* 2013;15:435.
- [3] Franca GPH, et al. *Cochrane Database Syst Rev*. 2017;4:CD008652.
- [4] Whelton PK, et al. *J Am Coll Cardiol* 2017 Nov 13. [Epub ahead of print].
- [5] Sundy JS, et al. *JAMA* 2011;306:711.