comorbidities. Not believing in medication may impact on the success of achieving these treatment goals.

Methods: To study which factors were associated to and predictive of beliefs about medicines during one year in patients with a recent gout attack and a need for ULT.

Objectives: To investigate the associations among FCB consumption, obesity and the level of serum uric acid (sUA) in male gout patients.

Methods: Consecutive gout patients who fulfilled the 2016 ACR/EULAR classification criteria were recruited. Demographic information, clinical characteristics and comorbidities of gout were collected. A 10-items food frequency questionnaire was developed which included alcohol, red meat, animal offal, seafood, hotpot, slow-cooking soup, FCB, tea, coffee and milk/milk products. Patients were asked to report the average consumption frequency over the one year prior to the first gout attack. Body composition was assessed by bioelectric impedance analysis and overweight was defined by body fat percent-age (BF%) as ≥25% for men and ≥35% for women.

Results: 1) Among 331 recruited gout patients, 96.1% were male, so only male patients were further analyzed. The median age of male patients was 37.5 (30, 49) years and median sUA was 9.5 (7.8, 10.5) mg/dl with 18.9% presented tophi. The mean BF% was 25.6±2.6% and 54.7% male patients were overweight. The prevalence of hypertension, diabetes, dyslipidemia, metabolic syndrome and fatty liver were 34.6%, 8.5%, 62.9%, 44.3% and 46.9% respectively. 2) There were no significant difference of food intake frequency between overweight patients and normal weight patients. Spearman correlation analysis results showed that FCB consumption was positively correlated with BF% (r=0.176, P=0.002), while milk/milk products consumption was negatively correlated with BF% (r=-0.117, P=0.038). After adjusted by age, duration, family history, eGFR, hypertension, diabetes mellitus, dyslipidemia, metabolic syndrome, fatty liver and the other nine dietary factors, multivari- able linear regression showed that FCB consumption was positively correlated with BF% (compared with <1 time/w, 3-4 times/w: coefficient β=2.4619, 95%CI 0.3580~4.5657, P=0.022; 4 times/w: coefficient β=2.6696, 95%CI 0.8266~4.5726, P=0.0049), and BF% was positively correlated with sUA (coefficient β=0.0784, 95%CI 0.0328~0.1239, P<0.001). However, FCB consumption was not correlated with sUA after adjusted by above confounders and BF% (P=0.079). 3) Further mediation analysis were performed to evaluate whether BF% mediated the correlation between FCB consumption and sUA. After adjusted by the confounding factors mentioned above, the total effect of FCB consumption on sUA was significant (compared with <1 time/w, >4 times/w: coefficient β=0.8813, 95%CI 0.1457~1.6169, P=0.019). BF% produced indirect effect on the correlation between FCB consumption and sUA (compared with <1 time/w, >4 times/w: indirect effect coefficient β=0.2115, 95%CI 0.0453~0.4032).

Bivariate comparisons studying demographic, medication and clinical varia- bles did not show consistent cross-sectional associations with beliefs in the importance of medication. However, after 12 months, bivariate com- parisons revealed statistically significant differences in mental health (SF36 MCS), physical function (HAQ) and self-efficacy for symptom control.

In logistic regression analyses, adjusting for age,gender, BMI and comorbid- ities, prediction of high beliefs in the relative importance of medication after 12 months were independently associated with baseline self-efficacy for symptom control (OR 1.04 per unit, 95% CI 1.01-1.06).

Conclusion: During one year of treat-to-target strategy in patients with gout, perceived necessity of medication and higher importance of mediation increases. Self-efficacy for symptom control at baseline was an inde- pendent predictor of high beliefs in importance of medication after 12 months. These findings support that patients increase their perception of the necessity of beliefs in medication during a treat-to-treat approach with ULT.

REFERENCE


Disclosure of Interests: Jon Anders Granovold: None declared, Sebastian James Heineby: None declared, Lars Fridtjof Karoliussen: None declared, Espen A Haavardsholm Grant/research support from: research funding from Pfizer, UCB, Roche, MSD, and AbbVie., Tore K. Kvien Grant/ research support from: AbbVie, BMS, MSD, Pfizer, Roche and UCB Consultant for: AbbVie, Biogen, BMS, Boehringer Ingelheim, Celgene, Celtrion, Eli Lilly, Hospira, Merck-Serono, MSD, Novartis, Oktal, Orion Pharma, Pfizer, Roche, Sandoz, Sanofi, Mylan and UCB, Speakers bureau: AbbVie, Biogen, BMS, Boehringer Ingelheim, Celgene, Celtrion, Eli Lilly, Hospira, Merck-Serono, MSD, Novartis, Oktal, Orion Pharma, Pfizer, Roche, Sandoz, Sanofi and UCB, Hilde Berner Hammer Speakers bureau: speakers fee from AbbVie, Bristol-Meyers Squibb, Roche, UCB Pharma and Pfizer, Till Uhlig Consultant for: Grüenthal, Novartis, Speakers bureau: Grüenthal, Novartis DOI: 10.1136/annrheumdis-2019-eular.4019

SAT0408 BODY FAT MEDIATES THE CORRELATION BETWEEN FRUCTOSE-CONTAINING BEVERAGES CONSUMPTION AND SERUM URIC ACID IN MALE GOUT PATIENTS

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Background: Fructose-containing beverages (FCB) consumption has been recognized as a promoter of hyperuricemia and gout in recent years. FCB consumption also contributes to the development of obesity which is an important risk factor of gout. However, data about the associations among FCB consumption, obesity and the level of serum uric acid (sUA) is limited.

Objectives: To study which factors were associated to and predictive of obesity and sUA level in gout patients.

Methods: Baseline data from a prospective observational study were used in patients with crystal-proven gout after a recent gout flare and insuffi- ciently treated serum urate (sUA) level (>360 μmol/L/5.6 mg/dl). In these patients a treat-to-treat approach was planned to meet the treatment tar- get (sUA <360 μmol/L or <300 μmol/L if clinical tophi). Assessments included demographic and clinical data, baseline serum urate levels, med- ication, comorbidities, physical function (HAQ), and SF-36 mental (MCS) and physical component summary scores.

The Beliefs in Medicines Questionnaire (BMQ) [1] queries patient beliefs about medicines on four subscales (necessity and concerns specific for the patient, generally on overuse and harm). Respondents indicated their degree of agreement with each individual statement about medicines on a 5-point Likert scale. Scores within the four subscales were summed (ranges 5-25 for necessity and concern, 4-20 for overuse and harm). Calculation of the difference between necessity and concern shows the relative importance of patients’ view on taking medication, and was grouped as high and low relative to the median.

Using multivariate analysis with logistic regression, baseline variables were explored as predictors of high beliefs in the relative importance of medication after 12 months.

Results: 202 patients were included at baseline, 94.1% men, 90.3% cau- casian, mean (SD) age 56.6 (14.2) years, disease duration 8.0 (7.7) years. Mean sUA level was 494 (SD 86.8) μmol/L at baseline, body mass index 28.9 (4.6) kg/m2, and physical function (HAQ) 0.36 (0.57). Not believing in medication may impact on the success of achieving these treatment goals.

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Conclusion: Our data show that body fat mediates the correlation between FCB consumption and sUA in male gout patients, which imply the importance of body composition assessment.

Acknowledgement: The present study was supported by Guangdong Natural Science Foundation, China (Grant no. 2014A030310086) to Qian-Hua Li.

Disclosure of Interests: None declared


SAT0409

P2X7R PROMOTE THE ATTACK OF ACUTE GOUTY ARTHRITIS IN RATS FROM CLINICAL TO PATHOLOGY

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Background: ATP may be the second causative signal for the onset of gout, which acts on P2X7R to regulate the development of acute gouty arthritis and the production of pro-inflammatory.

Methods: 120 male Sprague-Dawley rats were randomly divided into 3 groups: After establishment of acute gouty arthritis model, rats were given P2X7R agonist ATP, P2X7R inhibitor BBG and PBS, respectively. The clinical manifestations of the ankle joints were evaluated at 6h, 12h, 24h and 72h before the rats were sacrificed, and rat ankle synovial tissues were detected by ELISA kits.

Results: 1. P2X7R regulates the development of acute gouty arthritis: At 12h, the clinical scores of ATP group were significantly higher than those of BBG group and control group (P=0.001, 0.042), and the control group was higher than BBG group (P=0.034); At 12h and 24h, the swelling index of ATP group was the most obvious than other two groups (P=0.000, 0.001; P=0.000, 0.003), followed by control group (P=0.009, 0.001); Furthermore, there was a large infiltration of inflammatory cells in the synovial tissue of the right ankle joint of rats, at 12h, and 24h, the infiltration of mononuclear cell in ATP group was significantly higher than that in BBG group and control group (P=0.000, 0.007; P=0.000, 0.001); The neutrophils infiltration in ATP group was the highest among the three groups at 24h (P=0.001, 0.04), and the control group was higher than BBG group (P=0.04).

2. P2X7R regulates pro-inflammatory cytokines production: At 24h, the level of IL-1β in ATP group was significantly higher than BBG group and control group (P=0.001, 0.03); At 6h, 12h and 24h, higher level of IL-6 in ATP group compared with BBG group and control group (P=0.004, 0.04; P=0.000, 0.002; P=0.001, 0.012); The level of TNF-α was obviously higher in ATP group than in BBG group and control group at 6h and 24h (P=0.007, 0.011; P=0.001, 0.018), and BBG group was lower than control group, but without statistically significant (P>0.05).

Conclusion: Activation of P2X7R may significantly promote the attack of acute gouty arthritis and the production of IL-1β, IL-6 and TNF-α, suggesting that P2X7R affects the development of acute gouty arthritis and regulates the secretion of pro-inflammatory cytokines.

REFERENCE

Disclosure of Interests: None declared


SAT0410

RADIOGRAPHIC EROSION SCORE IMPROVED WITH TARGETED URATE-LOWERING THERAPY IN A PROSPECTIVE GOUT VIETNAMESE COHORT

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Background: Urate deposition in joints of patients with neglected gout leads to destrucdtive arthropathy, with subchondral bone erosion, bone construction, and late joint space narrowing. Gouty erosions are believed to improve underurate lowering drugs (ULDs), but their course has been little studied. We therefore performed a systematic prospective study of a Vietnamese cohort started on allopurinol at inclusion.

Objectives: The aim of this study was to activate P2X7R signaling pathway through changes in extracellular ATP concentrations, leading to the development of acute gouty arthritis and the production of pro-inflammatory.

Methods: Included patients had crystal-proven gout, eGFR > 60 ml/min and were not taking ULDs at inclusion. Allopurinol was progressively increased to reach EULAR-recommended uricemia targets and patients were prospectively follow-up, in particular with sequential hand and foot antero-posterior radiographs and MTP and knee ultrasound (US) scans. Joint erosions were scored according to a validated index1, double contour thickness was evaluated by a 4-point-score. One index tophus per patient (hand or foot) was measured by US scan.

Results: 100 patients (99M) with a mean age of 45.9 + 9.9 years, and median gout duration of 8 years (range 0-33) were included. 91 had clinical tophi. Mean baseline uricemia was 492 μmol/L. Median baseline US score was 10.0 (range 0.0-99.5). 52% of patients had evidence of urate arthropathy at baseline, 68 of the feet and 23 of the hands (all but 3 with foot involvement). 1st MTPs were predominantly involved (44 and 35 patients on the right and left sides respectively). Urate arthropathy at baseline correlated with gout duration (p=0.01), clinical tophi (p=0.0007), maximum double contour thickness and index tophus US measurement (p=0.03) by univariate analysis and with clinical tophi by multivariable analysis (p=0.03). Uricemia target <300 μmol/L was obtained in 63.6, 67.8, 70.6, and 61.0 % of patients at 3, 6, 12 and 24 months respectively. Median radiological follow-up was 12 months (range 3-49). Mean radiological erosion score was 12.1 at baseline (n=71), with a decrease of -0.7 at 6 months (n=38,