AB0891 HIGH FREQUENCIES OF CVD RISK FACTORS, OBESITY, METABOLIC SYNDROME, AND VITAMIN DEFICIENCIES IN A DANISH COHORT OF GOUT PATIENTS

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Background: Gout is associated with increased risk of Cardio-Vascular Disease and death.
Objectives: To measure the frequencies of a number of potentially modifiable CVD risk factors in gout patients.
Methods: Comorbidities and CVD risk factors were measured and registered in a cohort of 100 consecutive new crystal proven gout patients.
Results: 88 males (62.1±13.6 years) and 12 females (74.1±6.9 years) were included. See table for results.

Comorbidities	
Previous CVD (n=36/100)	36%
Hypertension (BT>140/90 mmHg) (n=80/100)	80%
Hypertension without antihypertensive treatment (n=22/100)	22%
Diabetes (n=28/100)	28%
Nephropathy (eGFR<60 ml/min) (n=29/99)	29%
One or more comorbidities	86%
Comorbidity risk factors	
BMI, mean±SD (n=95)	29.6±5.3
BMI ≥30 (n=44/95)	46%
Metabolic Syndrome (Int Diab Fed 2006) (n=68/95)	72%
P-High Density Lipoprotein <1.00 mmol/l (n=30/96)	32%
P-Low Density Lipoprotein >3.0 mmol/l (n=39/91)	43%
P-Triglyceride >2.00 mmol/l (n=48/96)	50%
Homocysteine >15 μmol/l (n=28/71)	40%
Homocysteine ≥20 μmol/l (n=17/71)	24%
Cobalamine <200 pmol/l (n=14/90)	16%
Folate ≤9 nmol/l (n=22/86)	26%
25 (OH)-vitamin D3 <50 nmol/l (n=45/94)	48%
25 (OH)-vitamin D3 <20 nmol/l (n=18/94)	19%

Conclusions: Nephropathy, obesity, and dyslipidemia are known to correlate to hyperuricemia and gout. Reciprocally hyperuricemia and gout may lead to development of comorbidities, i.e. hypertension, CVD, and nephropathy.
Almost half the patients in this study were obese emphasizing the correlation between hyperuricemia and gout and obesity. Weight reduction is beneficial for control of hyperuricemia and gout, and is an important lifestyle factor that may be addressed in the treatment of hyperuricemia.
Metabolic Syndrome is characterized by abdominal obesity and at least two of the following criteria: hypertension, diabetes, hypertriglyceridemia, and low blood levels of high-density-lipoprotein. Metabolic Syndrome is associated with a two-fold risk of CVD and was present in 72% of the gout patients.
High homocysteine levels are correlated to endothelial dysfunction and increased risk of CVD. In this study the majority of patients had levels of homocysteine in the upper normal range, and a quarter had hyper-homocysteinemia. Elevated homocysteine has previously been reported in gout correlated to impaired renal function, but hyper-homocysteinmia can also be induced by low blood levels of cobalamin, which was present in 16%, and low levels of folate, which was found in 26%. In addition, low folate has been associated with endothelial dysfunction and CVD independently of homocysteine.
Low levels of 25(OH)-vitamin D3 were observed in nearly half of the gout patients and deficiency were found in 19%. Obesity is known to be associated with low levels of vitamin D. Negative correlation between uric acid and Vitamin D has though been reported after correction for weight. Uric acid suppresses 1-alpha hydroxylase leading to low levels of 1,25(OH)2-vitamin D3 which is correlated to dyslipidemia and Metabolic Syndrome. Urate Lowering Therapy has been shown to counteract suppression of 1-alpha hydroxylase.
Due to the increased risk of CVD and death associated with gout and the high prevalence of comorbidities and CVD risk factors in gout patients - comprehensive evaluation, information, and treatment of reversible co-morbidities and risk factors is recommended to be a part of the clinical management of gout.
Disclosure of Interest: None declared
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AB0892 PROGRESSIVE CLINICAL BENEFIT IN CHRONIC REFRACTORY GOUT PATIENTS ACHIEVING A PERSISTENT URATE LOWERING EFFECT FROM PEGLOTICASE TREATMENT

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Background: Pegloticase is a recombinant uricase conjugated to polyethylene glycol approved for treatment of patients with chronic refractory gout. It profoundly decreases serum uric acid (UA) and resolves tophi, but the quality of the clinical benefit in patients achieving long-term UA lowering has not been assessed.
Objectives: To assess the clinical benefit of long-term UA-lowering with pegloticase in patients with gout.
Methods: This analysis used results from two randomized controlled trials (RCTs) of 6- months duration and the 2-year open-label extension (OLE) of these studies.[1,2] Efficacy was assessed in responders to the approved treatment regimen (8 mg pegloticase every 2 weeks [q2w]) in the RCTs (i.e., patients with plasma UA <6.0 mg/dL for ≥80% of the assessments around the 3 and 6 month time periods.) Clinical assessments included serum UA, frequency of gout flares, Patient Global Assessment (PGA), tender and swollen joints (TJC and SJC), pain measured with a 100-mm visual analog scale (VAS), Health Assessment Questionnaire Disability Index, bodily pain and the Arthritis-Specific Health Index from the Medical Outcomes Study Short Form 36 item, and reduction of target tophi.
Results: 33 patients who responded to pegloticase in the RCTs were followed throughout the OLE. Of these, 20 received 8 mg pegloticase q2w and 13 q4w. Both groups maintained markedly decreased serum UA levels during the OLE. Results for patients who received pegloticase q2w indicated significant improvements between RCT baseline and the final OLE evaluation for serum UA (P<0.0001), PGA (P=0.02), TJC (P=0.04), SJC (P=0.01), and pain VAS (P=0.01); 61.5% of patients in this group had complete target tophus resolution (P<0.0001). Results for those treated q4w indicated significant improvements between RCT baseline and the final OLE evaluation for serum UA (P<0.001), PGA (P=0.004), TJC (P=0.004), SJC (P=0.012), and pain VAS (P=0.01); 100% of patients in this group had complete tophus resolution (P<0.001). After an initial increase in gout flares during the initial 3 months of the RCT, there was a persistent decrease throughout the OLE. Maximal target tophus reduction was observed after 13–25 weeks of the OLE. Two of 20 (10%) patients receiving pegloticase q2w and 4 of 13 (31%) treated q4w lost the persistent UA-lowering effect during the OLE.
Conclusions: There were significant sustained clinical benefits with long-term pegloticase treatment in patients with chronic refractory gout achieving a UA lowering effect during the first 6 months of therapy. Significant decreases in TJC, SJC, and pain were noted along with significant improvements in PGA, suppression of gout flares, and resolution of tophi. In most patients, maximal benefit was noted after 6–12 months of pegloticase therapy, with many patients meeting newly proposed criteria for gout remission.[3]
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AB0893 DISEASE RELATED KNOWLEDGE IN GOUT PATIENTS AND THE RELATIONSHIP WITH ADHERENCE TO URATE-LOWERING THERAPY IN EAST CHINA

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Background: Gout is a chronic rheumatic disease caused by deposition of monosodium urate crystals in and around the joint, with a reported prevalence of 1.1% in mainland China and 6.24% in Taiwan, making it the most common form of inflammatory arthritis. With the disease progression, gout can cause permanent joint destruction, bone erosion, and organ damage. Urate-lowering therapy (ULT) is necessary to lower and maintain serum urate (sUA) levels at a therapeutic target of <360 μmol/L as this is associated with fewer gout flares, reduction of tophus size, and depletion of urate crystal stores in synovial tissues, making gout the only chronic arthritis that can be "cured". Disease related knowledge of gout patients should be assessed before attempting to improve health education.To date, except one study from south China, all other published papers about gout knowledge and medication adherence are from other countries. To our knowledge, there is no survey from east China.
Objectives: The current study aimed to investigate knowledge related to gout and it's risk factors, and the relationship with adherence to urate-lowering therapy in patients with gout in east China.
Methods: A cross-sectional study of 229 gout patients recruited from the Affiliated Hospital of Nantong University between August 2015 and November 2016 was conducted with two questionnaire, Gout Knowledge Questionnaire (GKQ) and Compliance Questionnaire on Rheumatology (CQR). Chi-square analysis, t-test, rank sum test, as well as logistic regression analysis were used to analyze data.
Results: 21.5% (49/228) of gout patients in east China had knowledge of gout, and 9.1% (13/143) adhered to ULT. Age, employment, income, alcohol use, family history, acute flares in preceding 1 year, and colchicine use were associated with awareness of gout-related knowledge, and age, income, alcohol use, and colchicine use were the predictors. Among patients with ULT, patients adherent to ULT tended to have gout-related knowledge, compared with non-adherent patients. Awareness of the cause of gout attack, flare prevention induced by ULT and comorbidity were correlated with medication adherence, and the cause of gout attack as well as flare prevention induced by ULT were predictors of adherence to ULT in gout patients in east China.