
AB0876 GOUT CAUSING URATE CARDIAC VEGETATIONS: SUMMARY OF PUBLISHED CASES

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Background: Gout is a progressive inflammatory disease that is both widely prevalent and widely undertreated. In gout patients, urate deposition occurs in peripheral joints, the spine, and organs including the prostate, kidneys, and in atherosclerotic plaques as well as heart valves. Due to the concern of bacterial endocarditis and associated sequelae, cardiac valve vegetations are generally thoroughly evaluated even without systemic symptoms. Gout causing cardiac valvular vegetations is believed to be rare, though to date a number of case reports on this topic have been published.

Objectives: This project sought to compile and synthesize the existing published cases of proven cardiac valve urate deposition in gout patients.

Methods: Medline and google were used to search for all available published cases involving gout associated with or causing cardiac valve vegetations. The references of each publication were additionally completely examined to find any other cases that may not have been identified on previous searches. The case reports were obtained and patient, disease, and valve factors were compiled and synthesized.

Results: Eight publications were found from 1954 to 2012 reporting 9 cases of urate deposition on cardiac valves. All cases had known tophaceous gout, mean age 60.9, and 85% were male. The mean uric acid level was 10.2 mg/dL, 4/9 (44%) reported a heart murmur, and in only one (11%) of the nine cases was infective endocarditis suspected. The diagnosis of gouty valvular involvement came from autopsy in 4 patients (44%), pathological report in 3 patients (33%), and was a diagnosis of exclusion after transthoracic echocardiogram in two patients (22%). The mitral valve was the most commonly involved heart valve, with 6 of the 9 gout patients (66%) with urate valvular deposits having them on the mitral valve. One patient had aortic and another had pulmonic valve involvement, while no patients were found to have tricuspid urate deposits from gout.

Conclusion: Though gout generally causes urate deposition in peripheral joints, urate deposits have been found in organs including the prostate, heart, kidneys, and eyes. Urate deposits from gout in heart valves are quite rarely reported, and this project describes 9 cases of urate valvular deposition associated with gout from 8 case report publications dating back to 1954. Based on these findings, urate deposition from gout on a cardiac valve will primarily remain a rare diagnosis of exclusion, but should be considered in patients with known longstanding visibly tophaceous gout, hyperuricemia, mitral valve involvement, and a lack of systemic signs or symptoms of infective endocarditis.

REFERENCES


AB0877 OXIDIZED LOW DENSITY LIPOPROTEIN IS CORRELATED WITH INFLAMMATORY STATUS IN GOUTY ARTHRITIS

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Background: Lipid peroxidation and oxidized LDL (oxLDL) are hallmarks in the development of various metabolic, cardiovascular and other inflammatory diseases. Cholesterol crystals and oxLDL, which are considerably present in atherosclerotic plaques, can activate inflammatory cells. The concentration of plasma ox-LDL was also closely associated with the high incidence of atherosclerotic diseases in patients with gout might be closely related to increased ox-LDL levels. However, the study about the relationship between the level of ox-LDL and the inflammatory status in gout patients are rare.

Objectives: We aimed to the relationships between ox-LDL level, inflammatory markers and uric acid lowering agents in gout patients.

Methods: One hundred seventy four gout patients were included from the 3 institutions from 2014 to 2017. Details of demographic and clinical features along with laboratory parameters, ESR, CRP, lipid profiles, oxLDL, and disease status were noted in patients with gout. We classified inflammatory status as acute, subacute chronic tophaceous and well controlled status. The level of ox-LDL was measured using the latex enhanced immune transmission turbidimetric method. We analyzed the comparison between demographics, inflammatory markers, lipid profiles and disease subset.

Results: The primary objective of this study was to assess the oxLDL according to inflammatory status in gouty arthritis. Mean age was 50.4 year-old, 85.7% was woman, 98.9% were male, mean BMI was 25.86 and mean disease duration was 48 months. Among 174 gout patients, 61 patients (35.1%) were acute flare-up, 38 patients (21.8%) were subacute and mean disease duration was 48 months. Among 174 gout patients, 61 patients (35.1%) were acute flare-up, 38 patients (21.8%) were subacute, 67 patients (38.5%) were chronic tophaceous, and 7 patients (4%) were well controlled stable status. Age, sex, BMI, and accompanying disease were not statistically different in the 4 groups according to inflammatory status. However, it showed statistically significant differences in the use of glucocorticoid and uric acid lowering agents. There was no significant difference in uric acid in laboratory tests, but there was a significant difference between ESR and CRP in each disease group. Especially, oxLDL showed difference according to inflammatory status of disease.