($r = -0.23$, $p < 0.05$). The links between FMD and LDL, GLU, SUA and with parameters reflecting the severity of gout were not revealed ($p > 0.05$). C-IMT in pts was 0.7 (0.6-0.8) mm. 7 (14.4%) pts had > 1.0 mm. A direct correlation was found between the C-IMT and the FMD ($p < 0.01$), CVR ($p < 0.001$), age ($p < 0.001$), duration of gout ($p < 0.001$), the number of joints affected for all time ($p < 0.005$) and the frequency of arthritis in the last year ($p < 0.05$). Correlation between C-IMT and LDL, GLU, SUA, hsCRP was not revealed ($p > 0.05$).

Conclusion: The ED, reflecting the risk of atherosclerosis, was found in 51.3% of patients with gout under the age of 55 years without clinical signs of coronary artery disease. The ED is associated with an increase in the CVR. C-IMT correlates with an increase in CVR and with parameters reflecting the severity of gout.

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AB0874

ANALYSIS OF LIFESTYLE AND CLINICAL FEATURES OF THE PATIENTS WITH GOUT IN MEIZHOU, GUANGDONG, CHINA

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Background: Gout is one of the most common metabolic diseases caused by purine metabolic disorder, leading to joint destruction and kidney impairment. With the improvement of living conditions, the incidence of gout is increasing year by year, especially in the developed coastal areas of China. Previous studies found that the management of gout was unsatisfied [1]. Besides, the development of rheumatology in Meizhou, Guangdong province is extremely slow. There are only ten rheumatologists, and the general public has a limited understanding of gout.

Objectives: Our aim was to explore the lifestyle, clinical features and risk factors of recurrent gout attacks in patients with gout in Meizhou, Guangdong province.

Methods: Demographic data, lifestyle and clinical data of 188 patients with gout in Meizhou were collected. Demographic variables included age, gender, marital status, education, BMI, smoking status, drinking status, diet, daily water intake, work style, exercise habit, late sleeping habit. Smoking status includes never smoking, ever-smoking or current smoking, and pack-year of smoking. The diet includes loving sweet food, beverage, seafood, fried food, and disliking vegetables and fruits. Amount of daily water intake is divided into 500-999ml, 1000-1499ml, 1500-1999ml and 2000ml and above. Working styles include long time of sitting, standing, walking, etc. Exercise habits include not exercising, exercising at least 1 hour a day, exercising at least 1 hour a week, and exercising at least 1 hour a month. Clinical characteristics include first time and cause of gout attack, blood uric acid value, the position of gout attack, pain score, duration, alleviating methods, treatment, patients' self-reported gout episodes (below 5 times, 5-10 times, 11-20 times, more than 20 times), tophi, family history and comorbidities. Multiple regression analysis was used to analyze the factors of the numbers of gout attacks.

Results: of the 188 cases, 171 (91.0%) were males and 17 (9.0%) were females. The average age was 55 ± 16 years. 94 (50%) of the patients were drinking alcohol, and 58 (30.9%) were fond of seafood and other high-purine food. 149 (79.3%) patients had less than 1000ml of water per day, and the vast majority of patients had no exercise habit (136 (72.3%)). The interval between the first gout attack and the first uric acid increasing was -0.4 ($S = 2.5$) years. The first gout attack occurred in the first metatarsophalangeal joint in 57 (30.3%) cases, followed by ankle joint in 40 (21.3%) cases, knee joint in 23 (12.2%) cases, and dorsal foot joints in 23 (12.2%) cases. The first gout attack occurred in 87 (46.3%) cases on the right side of the body. 25 (13.3%) patients' first gout attack occurs in more than one joint. The number of tophus is 0-21 per person. 64 (38.1%) patients had more than 20 gout attacks. Up to 70 (40.7%) patients never visited the hospital. 14 people were hospitalized due to gout. Colchicine was the most commonly used drug

in treatment in 59 (31.4%) cases, followed by allopurinol in 49 (26.1%) cases. Gout was positively correlated with age ($B = 0.313$, $P = 0.007$) and uric acid ($B = 0.04$, $P = 0.018$).

Conclusion: Gout patients in Meizhou, Guangdong are mainly male, and have bad living habits such as drinking, loving hyper purine food and lack of drinking water and doing exercises. The first gout attack is more likely to involve a unilateral lower extremity, especially first metatarsophalangeal joints. Meizhou patients with gout have earlier occurrence of tophi, and fail to see a doctor and have medication regularly. Therefore, gout patients should develop good living habits and receive regular medical education.

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AB0875

GOUT, NOT JUST A DISEASE OF THE FOOT. LITERATURE REVIEW OF SYSTEMIC DEPOSITION OF URATE

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Background: Gout is the most common adult inflammatory arthropathy in the US. Although tophi in the extremities is a known source of the inflammatory cascade, urate deposition in organs throughout the body is not as well recognized. Patients with gout often have associated comorbidities including renal disease, cardiovascular disease and metabolic syndrome, however, a casual role has not been established. Direct urate deposition in these organ systems may be of interest to link the causality of these systemic disorders.

Objectives: Perform a literature review including clinical exam, autopsy, pathology, and radiology imaging results demonstrating systemic deposition of urate exclusive of the extremities.

Methods: PUBMED from 1920 to 2018 was searched to identify reports of non-extremity urate deposition. Key words included: extra-articular gout, systemic deposition of urate, ocular gout, gout nephropathy, renal tophi, gouty heart, cardiac valves and urate, urate deposition in the arteries, prostate and urate, autopsy findings in gout, cutaneous urate deposits, gouty panniculitis, auricular gout, breast and urate, gastrointestinal gout, pancreas and tophus, laryngeal tophus, and spinal gout. The reference lists from these publications were also used to identify additional articles. The literature was reviewed for organ system involvement and documented based on sites of urate deposition within an organ system.

Results: There were 249 case reports documenting non-extremity urate deposition confirmed by autopsy, biopsy, surgery, clinical exam and/or radiology imaging. Urate deposition was reported in multiple organ systems (Table 1) including the spine, integumentary, ocular, renal, cardiovascular, gastrointestinal, larynx, breast, middle ear, pancreas, nasal, prostate gland, liver, pulmonary, penis, nailbed, and pelvis.

Conclusion: Numerous case reports document systemic deposition of urate based on autopsy, pathology, imaging and clinical exam. Urate crystal deposition with the formation of tophi and micro-tophi involve multiple organ systems including cardiovascular, renal, spine, integumentary, prostate, bowel, pancreas, eyes, pelvic, breast, lungs, middle ear, larynx, liver, penis, nailbed, and nose. Given the strong association of gout with various comorbidities, this demonstrates a need for further studies to determine the clinical significance of systemic urate deposition with respect to ongoing subclinical inflammation and potential end-organ damage.

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Abstract AB0875 Table 1

Organ System	# of Case Reports	Diagnostics
	N= 249	(Autopsy, biopsy, clinical exam, surgery, imaging)

Spine: Lumbar, thoracic, cervical facet joints, intervertebral discs, interlaminar space	102	Autopsy, biopsy, surgery, imaging
Integumentary: Dermis, hypodermis	40	Clinical exam, biopsy, autopsy
Ocular: Periocular soft tissues, conjunctiva, sclera, episclera, cornea, uvea, lens, orbit, retina, optic disc, vitreous body	33	Biopsy, clinical exam, imaging
Renal: Renal parenchyma (nephrolithiasis was excluded)	25	Autopsy, biopsy imaging
Cardiovascular: Valves (mitral, pulmonic, aortic), myocardium, conduction pathway, arterial wall, atherosclerotic plaque	12	Autopsy, biopsy, surgery, imaging
Gastrointestinal: Small intestine, colon	6	Autopsy, biopsy, imaging
Larynx	6	Clinical exam, biopsy
Breast	5	Biopsy, imaging
Middle Ear	4	Clinical exam, biopsy, imaging
Pancreas	4	Biopsy, imaging
Nasal	4	Clinical exam, biopsy
Prostate Gland	2	Biopsy
Liver	2	Biopsy, imaging
Pulmonary: Bronchus	1	Bronchoscopy, biopsy, imaging
Penis	1	Clinical exam, surgery
Nailbed	1	Clinical exam, biopsy
Pelvis	1	Biopsy, imaging

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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 89% 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.

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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 inflammasomes. 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, 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 state of disease.