

Gout

What is gout?

Gout is an inflammatory arthritis caused by the deposition of monosodium urate crystals (MSU) in joints and other tissues.

It is common in men older than 40 years and is rare in premenopausal women. (it can occur at any age in men, even in their 20s). It is now the most common form of inflammatory arthritis in the world.

What are the symptoms of gout?

Patients with gout typically complain of a red, hot, swollen joint of the foot or ankle with symptoms reaching their maximal intensity within 24 hours.

The attack often starts during the night or early morning.

Sometimes it is associated with a low-grade fever and malaise. Acute gout may also occur in other joints, soft tissues and the Achilles tendon. The attack usually resolves in 1 – 2 weeks with or without treatment. Skin overlying the affected joint may peel off several days after the attack.

Acute attack of gout may be triggered by the following factors: acute medical illness (e.g. infection), alcohol ingestion, bleeding, dehydration, drugs (e.g. diuretics and initiation of allopurinol, excessive intake of meat and seafood, ingestion of drinks containing fructose, surgery and trauma.

If the disease is left untreated, gouty attacks may become more frequent and affect more joints and become persistent.

Eventually, tophi can appear. Tophi are nodular masses of MSU crystals depositing under the skin or in the joint.

Gouty tophi appear as white to yellow firm deposits and may ulcerate through the skin and become infected. T

They are commonly found on the fingertips, feet, olecranon bursa (the soft tissue at the tip of the elbow), back of the forearm, Achilles tendon and the antihelix of the ear. Tophi can eventually result in joint deformity.



Figure 1. Gouty tophi in the fingers. Permission obtained from the patient.



Figure 2. Gouty tophi in the olecranon bursa. Permission obtained from the patient.

What are the causes of gout?

Gout is caused by sustained high levels of serum uric acid (hyperuricaemia), which results in the deposition of MSU in joints and other tissues.

The following factors may lead to hyperuricaemia: increased consumption of beer, drinks containing fructose, excessive intake of meat and seafood, lower levels of physical activity, obesity as well as metabolic syndrome, malignancy, kidney disease and drugs especially aspirin and diuretics.

There is genetic predisposition to having gout, and it often occurs in families.

How do we diagnose gout?

The investigation of gout involves a combination of blood tests, joint fluid analysis, radiographs, ultrasonography and/or dual-energy computerized tomography depending on the individual clinical scenario.

How do we manage gout?

The management of gout includes a combination of lifestyles changes and medications.

Weight loss and regular exercise are recommended.

In addition, increasing one's intake of low-fat dairy products, skimmed milk, cherries, as well as other vegetable sources of protein

Avoidance of beer and spirits, sugar-sweetened drinks, heavy meals and excessive intake of meat (particularly organ meats) and seafood (particularly anchovies, sardine and shellfish).

During an acute attack of gout, one should rest and apply ice over the affected joint intermittently.

The medication for acute attack includes non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroid and colchicine.

Patients with acute attacks often buy 'gout packs' over the counter at the pharmacy instead of seeking medical advice from the doctor. One should however be cautious with the use of the above drugs.

NSAIDs have many side effects and contraindications, for example, NSAIDs should be avoided if the patient has a history of stomach ulcer and kidney failure.

Long-term continuous use of corticosteroids can also lead to multiple complications, for example, weight gain, diabetes, cataract and osteoporosis. Colchicine cannot be used in the setting of renal failure. Thus, one should seek medical advice rather than just buying 'gout pack' medications.

After a single episode of acute attack, does it mean one has to be on lifelong medication? Not necessarily as 5-10% of the patients may never have another attack after a single gouty attack. The doctor will evaluate each patient individually and decide on the necessity of medication.

For patients who require medications, the goal of treatment is to reduce the serum urate level to below 0.36 mmol/l which is the saturation point for MSU to dissolve all crystal deposits. Thus, it is important to follow up the patient frequently with blood test monitoring.

What are the associated diseases that can occur with gout?

Chronic kidney disease, coronary artery disease, heart failure, stroke, peripheral arterial disease, obesity, hyperlipidaemia and diabetes mellitus.

Useful websites:

www.arthritis.co.za (Arthritis foundation of South Africa)

www.hopkinsarthritis.org/arthritis-info/gout/

www.uptodate.com

www.mayoclinic.com

<https://rheuminfo.com/diseases/gout/>