

(Refer to page 137)**Answer: Tophaceous gout**

Gout is characterised by hyperuricaemia and subsequent deposition of urate crystals in soft tissues and joints, with resultant joint inflammation causing arthritis. Clinically, it can be divided into four stages: asymptomatic hyperuricaemia (Stage 1), periodic acute gout attacks (Stage 2) with asymptomatic intervals (Stage 3), and chronic gout with or without tophi (Stage 4). Tophaceous gout, a feature of chronic or untreated gout, is now uncommon due to early detection and intervention. An attack of gout occurs when there is a sudden change in serum urate levels resulting in precipitations and depositions in joints. This typically occurs in cooler parts of the body where blood flow is also slower, with accumulation and clumping of the crystals to form a lump. The first metatarsophalangeal joint is the most commonly affected (Podagra). Although less common, other commonly affected areas include the Achilles tendon, olecranon bursa and helix of the ear.

The prevalence of gout is between one and two percent in the West with an annual incidence of 1.6 per 1,000 in men and 0.3 per 1,000 in women in those older than 50 years old.¹ It predominantly affects men, with a male to female ratio of 7:1 to 9:1. However the incidence in women is steadily rising and is approaching that of men's.² The peak age of onset is usually between ages 40

and 50. The risk factors include genetics, diet such as consumption of meat and alcohol (typically red wine), conditions with rapid cell turnover (haematological malignancies and chemotherapy), diuretic intake, obesity, insulin resistance, and hypertension.³ For diagnosis, joint aspiration with analysis of synovial fluid is required to demonstrate the strongly negative birefringent needle-shaped crystals under polarised light. Other tests include serum urate levels and radiographs of affected joints for damage.

In the long-term, tophaceous gout can lead to secondary osteoarthritis, causing significant debilitation and reduced quality of life. Tophi that are recurrently infected or significantly restrict joint movement may require surgical removal. Apart from medications, weight reduction if overweight, practicing a more active lifestyle and reduction in the intake of purine rich food such as red meat and beans are advised. Medications such as allopurinol (xanthine oxidase inhibitor) and probenecid (uricosuric agent) are recommended in chronic gout. The latter is recommended when gout is associated with low urate urine excretion rate. In acute attacks, non-steroidal anti-inflammatory drugs (NSAIDs) such as indomethacin are used, if no increased risk of renal or gastrointestinal complications. If contraindicated, prednisone and colchicine are other available options.

REFERENCES

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 - 3:** Choi HK, Atkinson K, Karlson EW, et al. Obesity, weight change, hypertension, diuretic use, and risk of gout in men: the Health Professionals Follow-up Study. *Arch Intern Med.* 2005; 165:742-48.
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