

(Refer to page 145)

Answer: Chronic tophaceous gout (CTG)

The radiograph showed radiolucency in the periarticular regions due to chronic uric acid crystal deposition of chronic tophaceous gout (CTG). The abnormalities are typically peri-articular and is pathognomonic of CTG.

Gout is a type of crystal arthropathy resulting from deposition of monosodium urate crystals in the synovial membrane, articular cartilage, ligaments and bursae. The onset is usually after 40 years and is more common in men.¹

Different stages of gout are recognised as i): asymptomatic hyperuricaemia, ii): acute monoarticular gout, iii): polyarticular gout and iv): CTG.

CTG is noted in about 50% of patients, between 6-12 years of the initial attack. It commonly affects the joints of hands and feet, asymmetrically (cf Rheumatoid arthritis), followed in frequency by larger joints of upper and lower extremity.²

The findings in soft tissues include gouty tophi from deposition of urate crystals, only 50% of which are radio-opaque. These are typically peri-articular but could also be within the bone or away from the joint.¹⁻³



Panel: showing radiolucent periarticular areas (dotted circles).

The findings in the affected joints include:¹⁻³

- a) Relative preservation of joint space in the initial stages
- b) Absence of periarticular osteopaenia (cf rheumatoid arthritis)
- c) Punched out erosions are typically asymmetrical in distribution and in the marginal or juxta-articular distribution
- d) Sclerotic overhanging edges are seen in 40% of cases. This results from remodeling of the edge of the cortex close to the erosion
- e) 'Mouse/rat bite' appearance from erosion from a long-standing soft tissue tophus
- f) Intra-osseous lesion is seen as a lytic lesion at times expansile due to urate crystal deposition in the bone

REFERENCES

- 1: Gout. Available from <http://learningradiology.com/notes/bonenotes/goutpage.htm>. (Accessed 27th August 2016).
- 2: Gout: Overview of Xray findings. Available from <http://www.rheumtutor.com/xray-findings-in-gout-2/> (Accessed 30th August 2016).
- 3: Bickle I, Gaillard F. Gout. Available from <http://radiopaedia.org/articles/gout> (Accessed 27th August 2016).