

## Multiple asymptomatic nodules in a middle-aged patient

A 42-year-old diabetic male, a chronic alcoholic and hypertensive, presented with history of multiple asymptomatic skin-colored nodules on the hands, feet and the right elbow since 1 month [Figures 1-2]. He had history of recurrent episodes of painful swelling over left foot since 2 years.

Local examination revealed nontender skin-colored to erythematous, firm nodules on dorsae of hands, right elbow,

left great toe, left lateral malleolus and Achilles tendon. Some of the lesions showed central softening. Systemic examination was normal. X rays of left knee, left 1<sup>st</sup> toe, both hands and wrists showed osseous destruction. Fine needle aspiration cytology [Figure 3] and skin biopsy [Figure 4] of the nodule were conclusive of the diagnosis.

### WHAT IS YOUR DIAGNOSIS?



Figure 1: Asymptomatic nodules on the dorsum of the hand



Figure 2: Asymptomatic nodule on the elbow

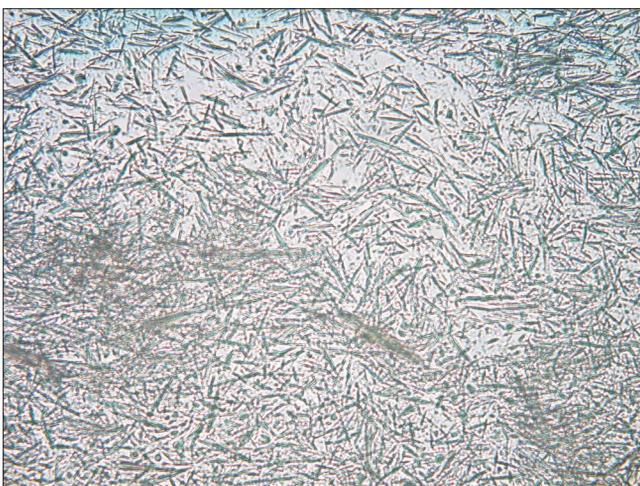


Figure 3: Fine needle aspiration cytology of the nodule (X400)

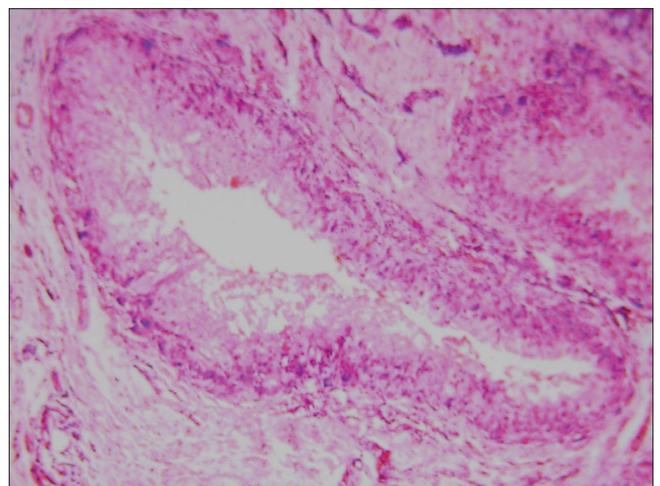


Figure 4: Histopathology of the nodule (H and E, X100)

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## Diagnosis: Tophaceous gout

Hematoxylin and eosin-stained histopathological section showed multiple foci of palisading granulomas involving the dermis. Fine needle aspiration revealed negatively birefringent, needle-shaped crystals of monosodium urate (MSU), thus confirming the diagnosis of gout. Serum uric acid was 9.7 mg% (normal: 2.5-7.0 mg/dl), consistent with the diagnosis of gout. His triglycerides were raised (198.75 mg/dl).

The patient was diagnosed as a case of chronic tophaceous gout and was started on colchicine, allopurinol, antihypertensives and oral hypoglycemic agents. With treatment, his pain improved dramatically with partial subsidence of the lesions over a period of 3 months.

## DISCUSSION

Gout is a metabolic disorder characterized by hyperuricemia and deposition of monosodium urate monohydrate crystals within the periarticular soft tissues. It usually presents with recurrent painful arthritis. Without treatment, tophi develop, on an average, about 10 years after the onset of the disease. These appear as subcutaneous nodules in the antihelix of the ear, olecranon, fingertips etc. They can also be present in cornea, aorta, or CNS. In some cases, tophi break through the skin and appear as white or yellowish-white chalky nodules, which have been described as looking like crab eyes.

Asymptomatic presentations have also been reported. Yamakawa *et al.* reported 12 cases of asymptomatic presentation in retrospective study of 54 patients.<sup>[1]</sup> Only 8 of the 54 patients presented with an acute attack of gout. They observed that asymptomatic swellings were more common when the lesions were situated on the extremities, while those centrally located on the face and neck tend to be painful.

Gout is an important differential diagnosis of longstanding asymptomatic or painful swellings. It needs to be differentiated from other causes of asymptomatic swellings, like fibromatosis, cholesterol tophi, rheumatoid nodules and pseudogout tophi. Gouty tophi may occur in the absence of hyperuricemia. Importance of impression smears and biopsy cannot be overemphasized in such instances. It is typically associated

with overeating, obesity, excessive purine consumption, alcohol intake, dyslipidemia,<sup>[2,3]</sup> diabetes mellitus and insulin resistance. Our patient had hypertension, dyslipidemia and alcoholism as the predisposing factors.

An elevated serum uric acid, leukocytosis and elevated erythrocyte sedimentation rate act as corroborative evidence. Synovial fluid aspiration/ biopsy give conclusive evidence. In other cases, histopathological examination of the gouty tophi helps to confirm the diagnosis of gout. Fine needle aspiration of the tophus, with polarization, as was done in our case, is an easy alternative to synovial biopsy and joint fluid analysis. It is simpler, easier and less painful.<sup>[4]</sup> These tophi are usually found in the subcutaneous tissue. Intradermal tophi, as were seen in our patient, with superimposed inflammatory episodes are rare skin manifestations of chronic tophaceous gout.<sup>[5]</sup>

Acute attacks of gout are generally treated with nonsteroidal anti-inflammatory drugs (NSAIDs). Chronic gout is managed by administration of probenecid, colchicine and/or allopurinol. Patients should rest the affected joints until the acute attack subsides. Bothersome large tophi can be surgically removed.

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