

THE CLINICAL PICTURE

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The Clinical Picture

Giant nodules on the hands



Inadequate treatment of hyperuricemia may result in chronic tophaceous gout

FIGURE 1

A 78-YEAR-OLD MAN with hyperuricemia treated with allopurinol (Zyloprim) presented with asymptomatic nodules on both hands (FIGURE 1), with progressive growth for 2 years.

Q: Which is the most likely diagnosis?

- ☐ Rheumatoid arthritis
- ☐ Nodular osteoarthritis
- ☐ Tophaceous gout
- ☐ Pseudogout
- ☐ Xanthoma tuberosum

A: **Tophaceous gout** is the diagnosis. This patient's serum urate level was 9 mg/dL (normal range 4.0–8.0) despite allopurinol therapy, with normal levels of lipids, urea, and creatinine. Polarized light microscopy of aspirated synovial fluid showed monosodium urate crystals, thus confirming the diagnosis.

Rheumatoid arthritis is typically polyarticular and symmetrical and spares the distal interphalangeal joints. Subcutaneous rheumatoid nodules may mimic gouty tophi.

Pseudogout shares some of the features of gout. It results from deposits of calcium pyrophosphate crystals in and around the joints.

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The diagnosis is made by identifying the crystals on microscopy when calcinosis is seen on x-ray. Tophaceous nodules almost never occur.

Xanthoma tuberosum is associated with hypercholesterolemia, particularly with elevated levels of low-density lipoprotein cholesterol. Lesions occur on pressure areas such as the knees or elbows and vary in size and shape from small papules to firm, lobulated tumors. They are yellow or orange, often with an erythematous halo. They are not associated with chronic proliferative arthritis.

■ CLINICAL PRESENTATION OF GOUT

Gout is a common metabolic disease characterized by an intermittent course of acute inflammatory arthritis initially affecting one or a few joints. Almost all patients have hyperuricemia, but serum urate levels can be normal or low during an acute attack. On the other hand, many hyperuricemic patients never have a clinical event.

If the hyperuricemia is untreated, some patients develop chronic polyarthritis and nephrolithiasis.¹ Inadequate treatment of hyperuricemia may result in chronic tophaceous gout. Although tophaceous gout usually is a sign of long-standing hyperuricemia, tophi can in rare cases be a first symptom of the disorder.²

Even though our patient had been on allopurinol therapy, the dose was not high enough to achieve a serum urate level significantly below the saturation point of urate (about 6.7 mg/dL). ■

■ REFERENCES

1. Logan JA, Morrison E, McGill PE. Serum uric acid in acute gout. *Ann Rheum Dis* 1997; 56:696–697.
2. Thissen CA, Frank J, Luckner GP. Tophi as first clinical sign of gout. *Int J Dermatol* 2008; 47(suppl 1):49–51.

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