

Images in Medicine

Chronic Tophaceous Gout

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A 44 year old man presented with a 15-day history of painful swelling of right middle finger, which was also red, warm, and tender. A tooth paste like, chalky substance was expressible on pressure from the swelling. The patient reported that he had occasional episodes of joint pains involving both small and large joints of the extremities. He denied a history of medication intake and past history of nephrolithiasis.

Key Words: Chronic Gout, Tophi, Hyperuricemia

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Clinical examination revealed normotensive individual with multiple tophi over olecranon process, fingers and thumb with chalky white material (Figure1:) and on the extensor surface of the feet (Figure 2:).



Figure 1: Gouty tophi with white chalky substance at periphery



Figure 2: Multiple gouty tophi

Investigations revealed normal hemogram and blood sugar profile. The serum creatinine was 1.2 mg/dL and uric acid was elevated 8.4 mg/dL (Normal range, 3.5 to 7.0 mg/dL). Ultrasonography of the kidneys was normal. Polarized light microscopy revealed needle-shaped, negatively birefringent urate crystals from the expressed substance. We

managed the patient as acute gouty arthritis with colchicine, indomethacin and allopurinol resulting in rapid resolution of symptoms.

Gout is an inflammatory arthritis caused by cellular reaction to monosodium urate crystal deposition and tophi are chalky accumulations of monosodium urate crystals in the soft tissue of an untreated gouty joint. Chronic tophaceous gout usually manifests after 10 years of untreated disease. The sites involved are olecranon bursa, infrapatellar and Achilles' tendons, subcutaneous tissue on the extensors of extremities (1). Risk factors for tophi include old age, use of diuretics, cyclosporine, excessive alcohol consumption and not using hypouricemic drugs (2). The differential diagnosis of tophi includes multicentric reticulohistiocytosis, rheumatoid nodule, nodal generalized osteoarthritis, pseudorheumatoid nodule and tuberotendinous xanthomas. Management of gout includes dietary advice, medical and surgical therapy (3). Medical treatment consists of analgesics, hypouricemics (allopurinol) and uricosurics (probenecid, sulfipyrazone). Surgery is indicated if the tophi are in a critical location, intractable joint pain, loss of motion and extensive joint destruction.

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