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Multiarticular chronic tophaceous gout: A benign disorder with malignant presentation

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Abstract

Gout is a metabolic disorder caused by deposition of MSU (monosodium urate crystals) in joints and associated inflammatory reaction to it. It usually affects elderly men and postmenopausal women. Chronic tophaceous gout takes usually 10 years to appear due to recurrent episodes of gouty arthritis. Our case is a 55 year male person with multiarticular tophaceous gouty arthritis. Pharmacological treatment has high remittance rate. Surgical treatment is seldom required for gout and is usually reserved for cases of recurrent attacks with deformities, severe pain, infection and joint destruction. Our case is interesting due to the fact that it is early onset and treated only by pharmacological means.

Keywords: gout, uric acid, tophaceous

Introduction

Gout is a common pathology due to defective uric acid metabolism characterised by spectrum of presentations such as acute gout, recurrent episodes of inflammatory arthritis, tophaceous soft tissue deposits of monosodium urate crystals, uric acid renal calculi and chronic nephropathy. Manifestations commonly appear as firm, pink nodules or fusiform swellings^[1, 2] We present a case of multiarticular chronic tophaceous gout in 55 year old adult male.

Case Report

Our patient, 55 year male presented to us with history of multiple swelling over the both the hands and the feet There was history of discharge of chalky white material from some the swellings, especially hands. (figure 1, 2) The swellings developed gradually over 4 year duration. Patient had no family history but, there was history of high protein diet and alcohol from past 20 years. He had tried multiple traditional methods for the condition but never resolved. He had difficulty to walk and even perform routine daily activities. Radiographs of both hands showed soft-tissue swelling and periarticular erosions in metacarpophalangeal joints with destruction of the same. (figure 3) Radiographs of the foot showed soft tissue swelling and partial erosion of the first MTP joint. (figure 4) Blood investigations showed raised serum uric acid levels (10 mg/dl) and ESR (55 mm/hr). FNAC of the swellings showed predominantly needle like crystals in acellular background. (figure 5) Patient was put on colchicine 1mg/ day in divided doses, short term steroids for few days and NSAIDS for a week. It was followed by febuxostat 40 mg/ day for next four weeks. In a week time pain reduced drastically and swelling reduced to 50 percent of its size in 3 weeks time. Patient was able to do his routine daily activities. After 4 weeks uric acid levels came upto 6.7 mg/dl. Subsequently patient was lost for follow up



Fig 1: Clinical Picture of Both Hand Showing Tophaceous Firm Swelling

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Fig 2: Clinical picture of both feet showing swelling



Fig 3: Xray picture of hand showing periarticular destruction of MCP joint



Fig 4: Xray picture of feet showing periarticular erosion in 1st MTP joint

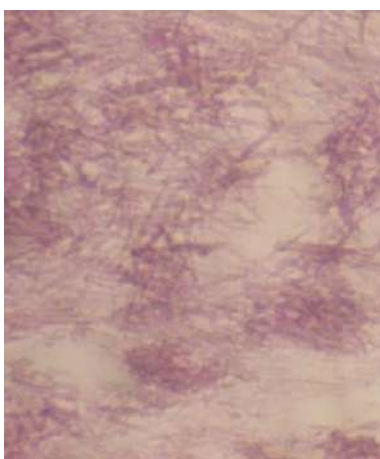


Fig 5: Light microscopy picture showing uric acid presenting as needle like crystals

Discussion

Gout is a common disease caused due to abnormal uric acid metabolism. The uric acid gets deposited in the joints due to crystallization resulting in recurrent arthritis. Older age, male sex, postmenopausal women, and black race are at higher risk of developing gout [3]

Hyperuricemia and gout can be attributed to uric acid elevating drugs (diuretics, cyclosporine, low doses of aspirin, etc.), genetic Polymorphisms in genes controlling renal urate transport and predisposing dietary factors, such as consumption of red meat, seafood, and alcohol [4]

Gout usually starts with affecting the first metatarsophalangeal joint of the foot and less commonly other joints. In untreated and traditionally treated patients tophaceous gout may develop, which is characterized by chronic destructive polyarticular involvement and tophi. Chronic tophaceous gout frequently occurs after 10 years or more of recurrent polyarticular gout [5] Tophi can occur in soft tissue and different organs either in presence or in absence of gouty arthritis. The prevalence of gout is much higher in men than in women and rises with age due to uricosuric action of estrogen.

In our case, history was quite short with extensive tophi in hands and feet occurring within 4 years of onset of arthritis. Kim *et al.* reported disseminated miliarial gout in a 34-year-old male, which occurred 4 years after onset of gouty arthritis [6]. Jung *et al.* reported a case of disseminated gout in the form of nodules that appeared after 10 years of gouty arthritis [7]. Gout can affect the large joints which can be confused with rheumatoid arthritis and calcinosis cuts. However it can be differentiated neurologically, biochemically and radiologically.

Treatment of Gout should include dietary modification as well as pharmacological measures. Nonpharmacological measures include diet restriction of purines, reducing intake of alcohol, and reducing weight. An acute attack is treated by NSAIDs, colchicines, or steroids. Normalization of hyperuricemia is the aim of treatment in chronic tophaceous gout. Drugs like probenecid favoring excretion of uric acid or allopurinol and febuxostat for inhibiting production of uric acid are used. Surgical removal of tophi is attempted only in the case of severe pain, joint deformities, or physical removal of tophi [8].

Statement of Consent: Informed written consent was taken from the patient for the publication of educational purpose

Conflict of Interest: None

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