

## The Physical Finding Points to the Diagnosis

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### INTRODUCTION

An 88-year-old female patient presented with an acutely sore and painful index finger. (See Figures 1,2.)

### DISCUSSION

The patient was diagnosed with an acute tophaceous gout attack. Gout is a crystalline arthropathy that arises from the accumulation of urate crystals in joints or surrounding soft tissues [1]. Uric acid is a normal byproduct of the breakdown of purines which can increase after consuming purine-rich foods (i.e. beef, organ meats, seafood, fructose-sweetened beverages, alcoholic beverages). It is estimated that 3% of the US population has gout. It is much more common in males than females before the 6th decade of life but rates begin rising in postmenopausal women along with their serum uric acid levels with about a 10-year lag resulting in a more equal sex distribution in the elderly [2].

When a patient experiences an acute gout attack, intense joint pain occurs within the first 12 hours of onset and is accompanied by inflammation, erythema, and subsequent lingering discomfort with limited range of motion, and generally slow resolution over days to weeks.

Patients presenting with these symptoms may undergo joint fluid examination, serum uric acid testing, and radiographic imaging for diagnosis. Often the presentation is "classic" and the diagnosis is made clinically.

Treatment options include nonsteroidal anti-inflammatory drugs, colchicine, and/or corticosteroids, and

more recently Interleukin-1 antagonist agents. Recurrent or especially painful occurrences are considered an indication for preventative therapy with a drug that blocks uric acid production (xanthine oxidase inhibitors, e.g. Allopurinol) or improves uric acid excretion (Probenecid).

If untreated, gout can result in joint erosion, painful or painless subcutaneous urate crystal deposition (tophi), and kidney stones.

This patient's acute flair resolved with a short course of colchicine; she was later placed on daily Allopurinol.

### References

1. Geiderman J, Usatine R. An elderly woman with a warm, painful finger. *West J Med.* 2000 Jan; 172(1): 51-52.
2. Dirken-Heukensfeldt KJM, Teunissen TAM, Lagro-Janssen ALM. Clinical features of women with gout arthritis. A systematic review. *Clin Rheumatol.* 2010 Jun; 29(6): 575-582.

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Figure 1. Photograph of the patient's left index finger revealing a small creamy white lesion on its volar surface with surrounding inflammation of the distal interphalangeal joint.



Figure 2. Plain radiograph revealing corresponding bony erosion of the distal interphalangeal joint of the patient's second digit.