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Case Report

Not Everything is as it Seems: A Case of Gouty Arthritis

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Abstract

Gouty arthritis is the most common microcrystalline arthropathy, typically presenting as a monoarticular and peripheral condition. Axial involvement, particularly of the spine and sacroiliac joints, is rare and can mimic other pathologieS, such as neoplastic lesions.

We report the case of a 67-year-old woman with a history of metabolic syndrome, renal lithiasis, severe gouty arthritis requiring toe amputations, and an allergy to allopurinol. She was admitted following an L1 vertebral fracture due to a fall, which was managed conservatively. Physical examination revealed multiple subcutaneous hardened nodules consistent with gouty tophi, one with sandy exudate. Imaging studies showed sacroiliac joint alterations and lytic lesions in L4-L5, initially raising suspicion of neoplastic infiltration. Further findings included an atrophic left kidney suggestive of xanthogranulomatous pyelonephritis. Laboratory workup revealed moderate hyperuricemia and elevated inflammatory markers. A biopsy of the sacroiliac joint confirmed gouty tophi. Treatment included dose escalation of Febuxostat and comprehensive risk factor management, resulting in significant clinical improvement at one-month follow-up.

This case underscores the importance of considering gouty arthritis in the differential diagnosis of osteolytic spinal and sacroiliac lesions. Targeted biopsy was crucial in confirming the benign nature of the condition. Early recognition and individualized treatment can lead to favorable outcomes even in complex presentations of gout.

Keywords: Arthritis, Gout, Lytic Lesions, Rheumatologic disorders.

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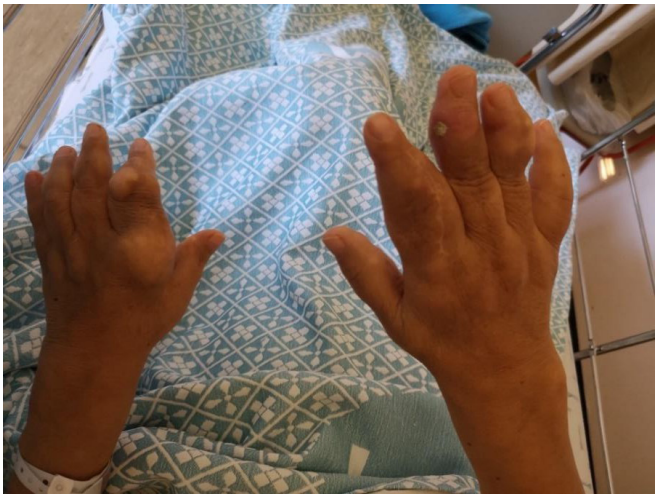
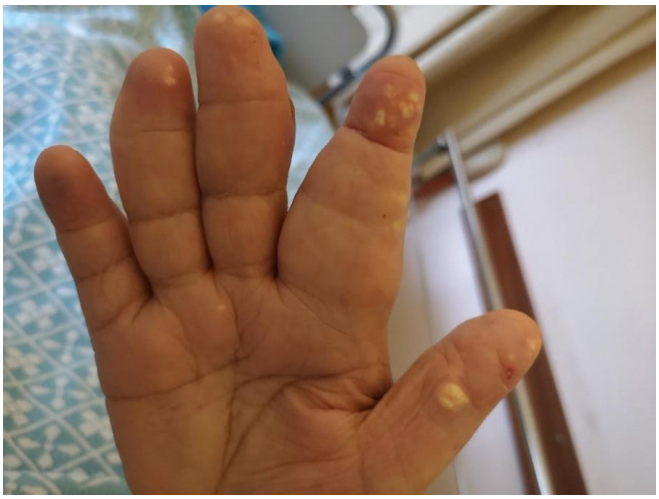
Introduction

Gouty arthritis is the most common form of microcrystalline arthropathy, typically presenting as a monoarticular and peripheral condition[1,2]. Axial involvement, particularly affecting the spine and sacroiliac joints, is rare, with the lumbar region being the most commonly affected[2].

Case Description

A 67-year-old woman with a history of metabolic syndrome, renal lithiasis, severe gouty arthritis requiring amputation of two toes on the lower limbs, and a severe allergy to allopurinol was admitted to the hospital. She was on Febuxostat 80 mg/day. The patient was hospitalized for an L1 vertebral fracture following a fall, which was managed conservatively. Physical examination revealed multiple subcutaneous, hardened nodules consistent with gouty tophi, one of which exhibited drainage of sandy exudate (Figures 1 and 2). Additionally, the patient had a prior amputation of the second toe on the left foot and the fourth toe on the right foot.





Figures 1 and 2. *Subcutaneous gout tophi on both hands.*

A computed tomography (CT) scan of the thoracolumbar spine showed sacroiliac joint alterations with secondary involvement of L4-L5, raising suspicion of neoplastic infiltration. Concurrent findings included an atrophic left kidney with lobulated contours, cortical thickening, and surrounding fat densification suggestive of xanthogranulomatous pyelonephritis (Figure 3). Further evaluation with osteoarticular magnetic resonance imaging (MRI) confirmed a predominantly lytic lesion, heterogeneously defined, with cortical destruction (Figure 4).

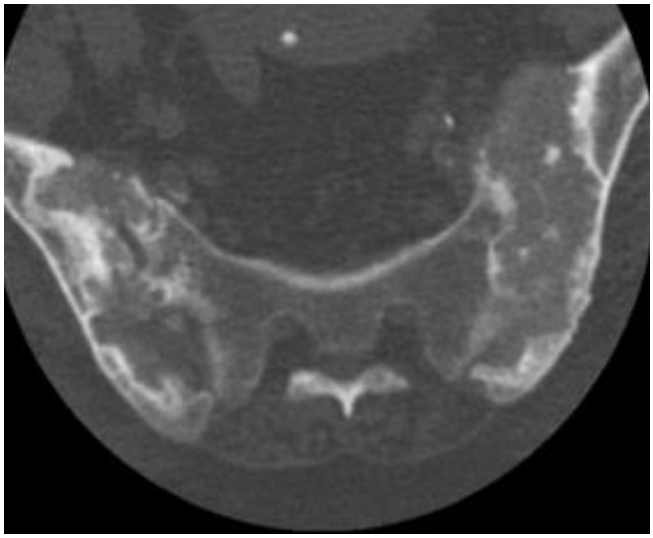


Figure 3. *CT of the sacroiliac joints: axial plane imaging revealing lesions with soft-tissue density centered on the sacroiliac joints, leading to widening of the joint space and loss of definition of the articular surfaces due to the presence of multiple associated bone erosions. Findings are more pronounced on the left side.*

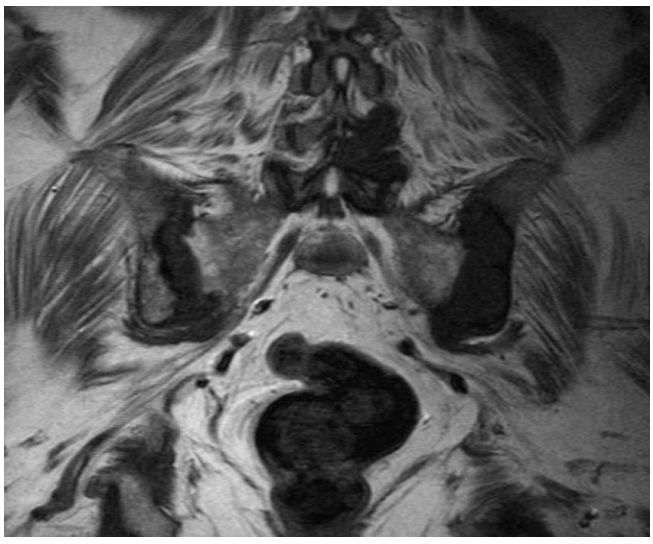


Figure 4. *MRI of sacroiliac joints: coronal plane of T1-weighted sequence revealing bilateral sacroiliac joint space widening caused by a hypointense lesion, as well as bone erosions (T2-weighted images not available).*

Laboratory findings revealed moderate hyperuricemia (6.2 mg/dL), moderate hypocalcemia, slightly elevated GGT (45 U/L), iron deficiency anemia (Hb 9.6 g/dL), and an elevated erythrocyte sedimentation rate (92 mm/1st hour). A biopsy of the sacroiliac joint was performed, revealing deposits of amorphous material with multinucleated giant cells, consistent with gouty tophi (Figure 5).

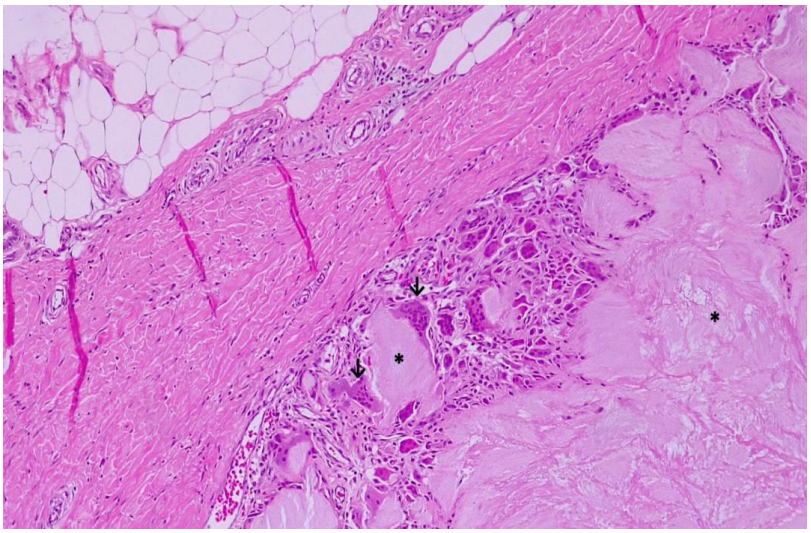


Figure 5. *Amorphous material deposits (*) are observed in association with multinucleated giant cells (arrow). These findings are consistent with gouty tophus.*

The patient was discharged with oral analgesia, management of vascular risk factors, encouragement of weight loss, and an increased Febuxostat dose to 120 mg/day. At a follow-up appointment one month later, clinical and mobility improvements were observed.

Discussion

Gouty arthritis involving the sacroiliac joint has been reported in only a small number of cases, with most diagnoses relying on radiological evaluation. It should be considered a differential diagnosis in cases of osteolytic lesions of the spine or sacrum[3,4]. In this case, although there was a high initial suspicion of secondary neoplastic lesions of unknown primary origin, the final diagnosis was a more benign condition, confirmed through targeted biopsy.

Conclusion

This case highlights the importance of considering gouty arthritis as a potential differential diagnosis in patients with atypical presentations of axial or sacroiliac involvement, particularly when radiological findings suggest osteolytic or neoplastic lesions. Despite the initial suspicion of malignancy, the confirmation of gouty tophi through biopsy underscores the value of targeted diagnostic procedures in reaching a definitive and more benign diagnosis. The patient's favorable clinical response to optimized medical therapy, including increased Febuxostat dosage and comprehensive management of comorbidities, emphasizes the importance of individualized treatment strategies in complex cases of gouty arthritis. This case reinforces the need for awareness of unusual manifestations of gout to avoid misdiagnosis and ensure appropriate management.

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