

Case Report

# Xanthogranulomatous Osteomyelitis: A Rare Case Report

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## ABSTRACT

**Introduction:** Xanthogranulomatous lesions are well documented chronic inflammatory findings. Xanthogranulomatous lesions in lung, brain and bone are rare. Being presented here is a case of Xanthogranulomatous osteomyelitis in the intertrochanteric region.

**Case report:** The case being reported here is of an 80-year-old female who presented with a left intertrochanteric fracture followed by fever, local tenderness, draining sinus and pus discharge. Microscopic features revealed aggregation of foamy histiocytes, neutrophils, lymphocytes and activated plasma cells. There was no evidence suggestive of malignancy.

**Conclusion:** Diagnostic considerations of xanthogranulomatous osteomyelitis should include: histopathology, site of the lesion, bony involvement and ruling out other benign and malignant conditions of the bone.

**Key words:** Xanthogranulomatous osteomyelitis, chronic inflammatory, lesion.

## INTRODUCTION

Xanthogranulomatous osteomyelitis is chronic inflammatory disease confirmed on microscopy with characteristic features of foamy histiocytes, neutrophils, lymphocytes, activated plasma cells. Lung, brain and bone are the rarest locations for Xanthogranulomatous lesion. Most common being Kidney and Gall bladder. <sup>(1)</sup> We have a case presenting with lesion on the intertrochanteric region and so far very few cases have been reported in that particular region of the skeletal system. <sup>(2)</sup>

## CASE REPORT

An 80 year old female came from the orthopaedic department with left intertrochanteric fracture after fall in bathroom. It was followed by fever, local tenderness,

draining sinus and pus discharge. The patient had no history of tuberculosis, diabetes and COPD

*Gross Features* showed multiple, firm to gritty, grey white tissue bits, largest measuring 3 cm smallest measuring 1cm.

*Microscopic features* showed bony trabeculae with normal marrow elements. There were dense sheets of foamy histiocytes and few histiocytic giant cells along with focal dense neutrophilic infiltrate. Also seen were chronic inflammatory infiltrate against fibrinous background seen. No evidence of epithelioid granuloma or necrosis was seen. No evidence of malignancy was noted. The foam cells were PAS and PAS with diastase - Positive. Histomorphological features were suggestive of Chronic

xanthogranulomatous osteomyelitis. No

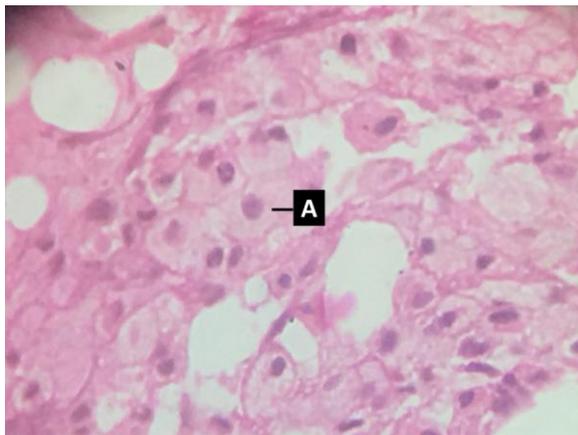


Fig. 1. High power view  
A) Foamy cells A) Bony Tissue  
B) Inflammatory infiltrate

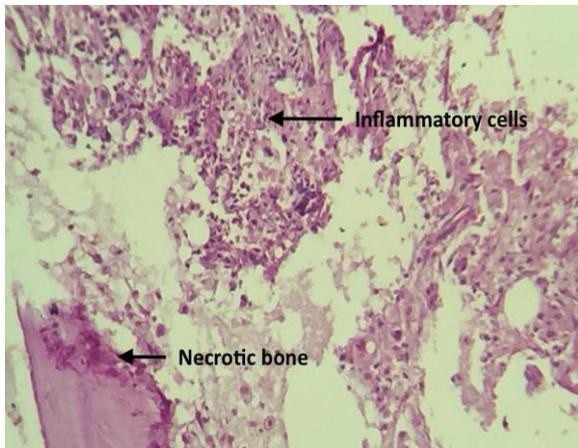


Fig. 3. High power view

## CASE DISCUSSION

Xanthogranulomatous osteomyelitis is a rare condition to occur with very limited number of case reports so far. The most common areas of presentation of an inflammation of the xanthogranulomatous type are gall bladder, kidney, urinary bladder and even the ovaries. Least common areas are the prostate, lung, brain and bone. [2]

In the bones the most notable areas are the long bones, especially at their ends. Other possible areas are the first rib and fingers too. When xanthogranulomatous osteomyelitis occur, it does so with a male preponderance and male:female ratio of around 6:1. Often on radiology the bony lesion appears lytic. [2]

Microscopically, the differential diagnosis for Xanthogranulomatous

evidence of malignancy was noted.

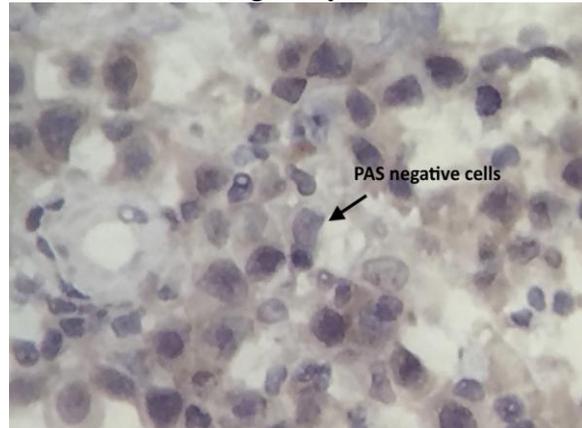


Fig. 2. High power view

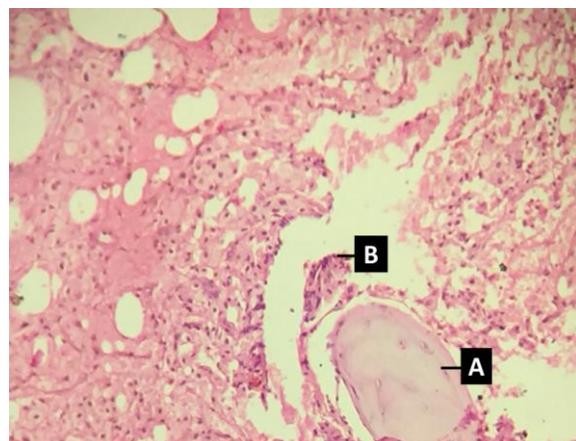


Fig. 4. High power view

osteomyelitis is Langerhans cell histiocytosis (LCH), Erdheim-Chester disease (ECD) and lipid storage disorders. (5,6)

LCH usually has preponderance in children and shows Birbeck granules. In this case we present a lesion on the intertrochanteric region of the left femur. ECD usually involves extraskeletal tissues with cholesterol clefts and foamy histiocytes. (3,4) In Gauchers and Niemann Pick's disease, foamy cells are usually found in the bone marrow.

## CONCLUSION

Xanthogranulomatous osteomyelitis is a very rare form of osteomyelitis. It should be distinguished from other benign and malignant pathologies of the bone. Also factors like the site should be considered

when expecting a xanthogranulomatous lesion. However rare manifestations like bony involvement should be ruled out as well.

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