

## Benign Xanthogranulomatous Cyst Of The Hip Following Total Hip Arthroplasty: A Case Report

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### INTRODUCTION:

The occurrence of cyst around total hip arthroplasty (THA) is rare. There are several well-described causes of mass following THA, including polyethylene and metal wear debris, infection, expanding hematoma, and synovial cysts. However, formation of benign xanthogranulomatous cyst of the hip following THR has never been reported before, to the best of our knowledge.

### CASE REPORT:

We report a case of a 68-year-old gentleman, with underlying end stage renal failure, had bilateral THA done 10 years ago. He presented with progressively increasing size of painless right hip swelling for one-year duration. He had no fever or constitutional symptom.

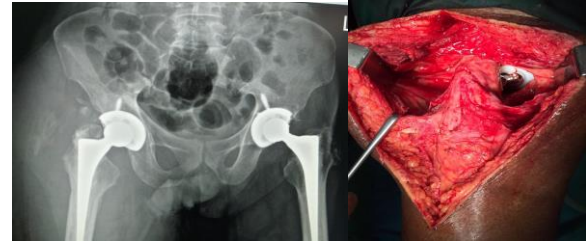
The mass sized 15 x 8cm over the anterolateral aspect of the hip joint. It was fluctuant with smooth surface. There was an ulcer discharging clear yellowish fluid over the mass.

Plain radiograph showed increased soft tissue shadow over the lateral aspect of the right hip and proximal femur (figure 1). No periprosthetic radiolucency to suggest loosening or osteolysis. ESR and CRP were raised, while total white count within the normal range. With suspicion of infection, patient was planned for debridement surgery.

Intra-operative finding was a large cyst which contained about 1.5 liter of clear fluid, lower viscosity in comparison with synovial fluid. The cyst wall enveloped the hip joint from anterior to posterior, connecting with lining of the acetabulum. Posteriorly, the cyst wall covered the gluteus maximus muscle and overlying the sciatic nerve. Laterally, the cyst wall extended and wrapped the proximal femur almost 80 percent of the circumferential perimeter (figure 2).

The cyst wall was excised. The prosthesis was found to be stable. Patient was covered with short term antibiotic. One-year post surgery,

patient was asymptomatic and no implant loosening to date.



**Figure 1**

**Figure 2**

Histopathological examination of the cyst showed two different morphologies. One is massive collection of foamy macrophages, foreign body giant cells surrounding by numerous cholesterol cleft which occupies the entire dermis up to subcutis with chronic inflammatory cells where eosinophils seen throughout the lesion and thickened fibrous wall This represents the xanthogranulomatous changes secondary to lipid base foreign body.

### DISCUSSIONS:

It was thought that wear debris may function as a foreign body and phagocytosed by macrophages, resulting in a granulomatous reaction. These cysts also believed to be subclinical infections which currently known as granulomatous pseudotumours. However, in our case, we didn't observe any implant loosening. Microscopic wear from the polyethylene is a possible cause.

### CONCLUSION:

Benign xanthogranulomatous cyst around the THA in this case did not associate with visible prosthesis problem, and was treated with excision and short term antibiotic. This is a rare clinical scenario, and long term follow up of the patient will better show the natural history of the disease.

### REFERENCES:

1. Gupta Nalini et al., Xanthogranulomatous Osteomyelitis: A Case Report. *Medicine Journal*; Vol. 1, No. 6, 2014; Pg 45-47.
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