

## OSTEOCHONDROMA OF THE POSTERIOR FEMORAL NECK: A RARE CAUSE OF SCIATIC NERVE COMPRESSION

**Sanjay Yadav\***

Assistant Professor, Dept. of Orthopedics, Institute of Medical Sciences, Banaras Hindu University, India \*Corresponding Author

**Pankaj Maurya**

Residents, Dept. of Orthopedics, Institute of Medical Sciences, Banaras Hindu University, India

**Mohit Kumar**

Residents, Dept. of Orthopedics, Institute of Medical Sciences, Banaras Hindu University, India

**Rajkumar Arya**

Residents, Dept. of Orthopedics, Institute of Medical Sciences, Banaras Hindu University, India

### ABSTRACT

**INTRODUCTION:** Osteochondroma is the most common primary benign bone tumor and comprises a third of these tumors. They are usually extraarticular secondary to their common origin from metaphysis of long bones. Osteochondroma of the femoral neck is atypical as they represent an intraarticular lesion. They are mostly asymptomatic depending on their size and location.

**CASE STUDY:** An eighteen year old male presented to us with complaint of pain in left posterior hip region, difficulty in sitting on hard surface, mass in buttock associated with tingling sensations in left lower limb since eight months. On examination, sensations were decreased on plantar and dorsal aspect of left foot. Motor power was diminished for both ankle plantar and dorsiflexors. A firm to hard pedunculated mass measuring 12 x 10 cm was palpated on posterior femoral neck which was confirmed on plain radiographs. CT and MRI were done to further delineate the anatomy and cartilage cap assessment.

**MANAGEMENT:** Surgical intervention in the form of extra-periosteal resection was performed through posterior approach. Intra-operatively, sciatic nerve was found to be stretched on medial aspect of tumor. Post-operatively symptoms resolved dramatically. At follow up, patient had full resolution of neurologic findings. Histopathology report confirmed the diagnosis of osteochondroma.

**CONCLUSION:** one should be aware of rare entities such as proximal femur osteochondroma during diagnosis and treatment of sciatic neuropathy along with other common etiologies.

**KEYWORDS :** Osteochondroma, femoral neck, sciatic nerve, compression, resection

### INTRODUCTION

Osteochondroma is the most common primary benign bone tumor and comprises a third of these tumors. They are usually extraarticular secondary to their common origin from metaphysis of long bones. Osteochondroma of the femoral neck is atypical as they represent an intraarticular lesion. They are mostly asymptomatic depending on their size and location.

### CASE STUDY

**Clinical history:** An eighteen year old male presented to us with complaints of swelling and pain in left posterior hip region. He had difficulty in sitting on hard surface. On examination, there was a mass in buttock associated with tingling in left lower limb since last eight months. Sensations were decreased on plantar and dorsal aspect of left foot. Motor power was diminished for both ankle plantar and dorsiflexors. A firm to hard pedunculated mass measuring 12 x 10 cm could be palpated on posterior hip region.

**Radiology:** Plain radiographs showed a fluffy sclerotic lesion at femoral neck. CT scan and MRI were done to further delineate anatomy and cartilage cap assessment (figure 1).

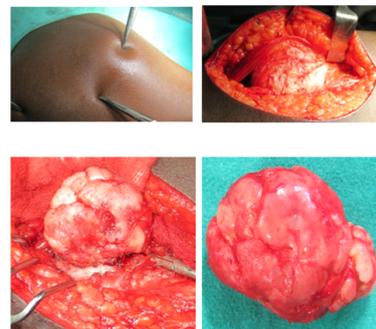


**Figure 1.** Radiology: a) Plain xrays showing fluffy lesion in femoral neck region. b,c) CT scan delineating exact anatomical localization in

coronal and axial sections. d) Three dimensional reconstructed image shows size of lesion approximately equal to the femoral head.

### MANAGEMENT AND RESULTS

Surgical intervention in the form of extraperiosteal resection was performed by posterior approach. Intra-operatively, sciatic nerve was found to be stretched on medial aspect of tumor (Figure 2). Post-operatively symptoms resolved dramatically. At follow up, patient had full resolution of neurologic findings.



**Figure 2. a)** This shows extent of lesion palpable in anterior to posterior direction. b,c) Intra-operative stretching of tissues above the osteochondroma and gradual demarcation all around. d) Final excised specimen with cartilage cap.

### DISCUSSION

Osteochondroma of femoral neck is rare. It is atypical as it represents intra-articular lesion. It has been described in association with trochanteric bursitis, sciatic nerve compression, snapping hip, femoroacetabular impingement, fracture at its pedicle, or symptomatic non-union of such a fracture<sup>1</sup>. In our patient; it was associated with buttock pain and sciatic nerve compressive pathology. Osteochondroma of the femoral neck may lead to pain

and mechanical restriction of hip motion<sup>2</sup>. Differential diagnosis for sciatic nerve compression is substantial and can be divided into intraspinal, extraspinal, pelvic, and extrapelvic categories of anatomical etiology. Neurovascular compression in osteochondroma is rare and occurs in <1% of all cases<sup>3</sup>.

In the current case, buttock pain may be due to mechanical impingement between osteochondroma and ischium. An element of bursitis as a cause of pain can also contribute to pain. Sciatic nerve symptoms were probably caused due to stretching of nerve over the tumor; which improved after surgical excision. The patient presented here did not demonstrate any signs of intraarticular pathology such as cartilage delamination or labral damage, eliminating the need for trochanteric osteotomy and surgical hip dislocation.

### CONCLUSION

Sciatic neuropathy can be due to varied etiology. It may be a clinical manifestation of femoral osteochondroma very rarely. So, one should be aware of rare entities such as proximal femur osteochondroma during diagnosis of sciatic neuropathy. Surgical en-bloc resection protecting the surrounding neurovascular structures is a reliable means of treatment with resulting resolution of symptoms dramatically.

### REFERENCES

1. Yu K, Meehan JP, Fritz A, Jamali AA. Osteochondroma of the femoral neck: A rare cause of sciatic nerve compression. *Orthopedics* 2010; 33: 625-6
2. Turan Ilica A, Yasar E, Tuba Sanal H, Duran C, Guvenc I. Sciatic nerve compression due to femoral neck osteochondroma: MDCT and MR findings. *Clin Rheumatol* 2008; 27: 403-4
3. Siebenrock KA, Ganz R. Osteochondroma of the femoral neck. *Clin Orthop Relat Res* 2002; 394: 211-8