

CASE REPORT

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## Solitary Osteochondroma of the Ischial Ramus Causing Sciatic Nerve Compression: A Case Report

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### ABSTRACT

Osteochondromas are the most common benign bone tumors, usually arising from the metaphyseal region of long bones. Involvement of the pelvic bones is rare, and compression of the sciatic nerve due to an ischial ramus osteochondroma is exceptionally uncommon. We report a rare case of a 39-year-old male presenting with sciatica due to a solitary osteochondroma of the ischial ramus. Surgical excision led to resolution of symptoms. Early identification and intervention are crucial in such cases to prevent long-term neurological deficits.

**Keywords:** Osteochondroma, Ischial ramus, Sciatic nerve compression, Pelvic tumor, Benign bone tumor, Case report.

### INTRODUCTION

Osteochondromas account for 35–50% of all benign bone tumors and commonly affect the metaphyses of long bones such as the femur, tibia, and humerus. Pelvic osteochondromas represent less than 5% of all cases. Compression of neurovascular structures is rare but can occur, especially when tumors are located near major nerve pathways. Sciatic nerve compression due to ischial osteochondroma is extremely rare and often presents as atypical sciatica, making diagnosis challenging.

### Case Presentation

#### Patient Profile

- **Age/Sex:** 39-year-old male
- **Occupation:** Manual laborer
- **Medical History:** No significant past medical or surgical history
- **Presenting Complaint:** Left-sided buttock pain radiating to the posterior thigh and leg for 8 months, worsening with sitting and prolonged walking

### History

- Gradual onset, progressive discomfort
- Paresthesia over posterior thigh and calf
- No trauma, fever, or weight loss
- No bowel or bladder dysfunction

### Clinical Examination

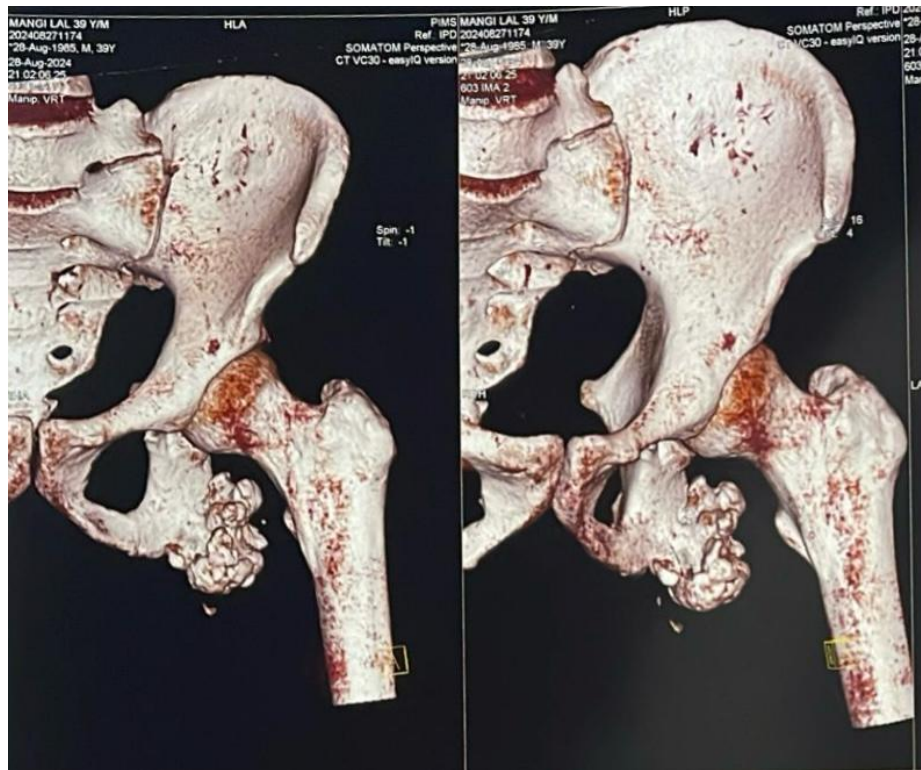
- Positive straight leg raising test at 45° on the left
- Tinel's sign positive over the sciatic notch
- Mild tenderness over the left gluteal region
- No motor weakness but decreased sensation along S1 dermatome
- No palpable mass externally

### Investigations

- **X-ray pelvis (AP view):** Bony outgrowth from the left ischial ramus



- **MRI pelvis and thigh:**
  - Well-defined bony lesion arising from the left ischial ramus
  - Continuity with the medullary cavity
  - Cartilage cap <1 cm
  - Compression and displacement of the left sciatic nerve
- **CT scan:** 3D reconstruction confirmed pedunculated lesion projecting posteriorly



## Diagnosis

Solitary osteochondroma of the left ischial ramus with sciatic nerve compression

## Treatment Plan

- Surgical excision planned under general anesthesia
- Posterior approach to the ischial region
- Intraoperative identification and protection of the sciatic nerve
- En bloc excision of the osteochondroma including the cartilage cap
- Histopathology confirmed benign osteochondroma







Histopathology report: A mature trabecular bone structure with regular endochondral ossification suggestive of osteochondroma

#### Postoperative Management

- Pain significantly reduced post-op
- Neurological symptoms began to resolve by day 3
- Mobilized with weight bearing as tolerated on day 2
- Discharged on postoperative day 5
- Physiotherapy initiated for nerve recovery and gluteal strengthening

### **Follow-up**

- At 6 weeks: Complete resolution of radiating pain
- At 3 months: Full sensory recovery, no recurrence on imaging
- Harris Hip Score improved from 68 pre-op to 95 post-op
- No complications noted

### **DISCUSSION**

While osteochondromas are usually asymptomatic, those located in the pelvis can present uniquely due to proximity to neurovascular structures. Sciatic nerve compression is particularly rare and may mimic lumbar radiculopathy, often leading to misdiagnosis. Imaging, particularly MRI, is essential for diagnosis and surgical planning. Complete excision prevents recurrence and neurological deterioration. Malignant transformation, though rare (<1%), must be ruled out, especially in adults.

### **CONCLUSION**

Solitary osteochondroma of the ischial ramus, though rare, should be considered in young adults presenting with atypical sciatic pain. Surgical excision is curative and results in full recovery if performed early. Multiplanar imaging and intraoperative nerve protection are key to successful outcomes.

### **PATIENT CONSENT**

Written informed consent was obtained from the patient for publication of this case report and accompanying images.