IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 24, Issue 5 Ser. 3 (May. 2025), PP 50-53
www.iosrjournals.org

A Rare Case Of Osteochondroma Arising From The Iliac Wing In 28 Years Old Male

Dr. Shubham Patil, Dr. Vijayakumar B S
(Post Graduate, Orthopaedics, Akash Institute Of Medical Sciences & Research Centre, Bengaluru)
(Professor, Orthopaedics, Akash Institute Of Medical Sciences & Research Centre, Bengaluru)

Abstract
Osteochondromas are the most common benign bone tumors, predominantly affecting the metaphyses of long bones. Their occurrence in the pelvis, particularly the iliac wing, is exceedingly rare. We present a case of a solitary osteochondroma in a 28-year-old male patient, diagnosed through clinical evaluation and imaging. Surgical excision was performed, and histopathological analysis confirmed the diagnosis.

Keywords: *Osteochondroma, Pelvic bone, Iliac wing, Benign bone tumor, Rare case, Surgical excision, Orthopedic oncology, Case report*

Date of Submission: 05-05-2025 Date of Acceptance: 15-05-2025

I. Introduction

Osteochondroma is the most common benign bone tumor, accounting for approximately 35–50% of all benign osseous neoplasms. It typically manifests as a cartilage-capped bony projection arising on the external surface of bones, often near the growth plates of long bones such as the femur, tibia, and humerus. These tumors are generally discovered during adolescence or early adulthood and may present as solitary lesions or multiple exostoses in the context of hereditary multiple osteochondromas.

In contrast, osteochondromas arising from flat bones like the pelvis are rare, particularly in the iliac wing. Such cases often remain asymptomatic until they grow large enough to cause mechanical irritation, neurovascular compression, or cosmetic deformity. Due to their deep location and atypical presentation, pelvic osteochondromas may be underdiagnosed or misdiagnosed, delaying appropriate management.

II. Case Presentation

· Patient: 28-year-old male
· Chief Complaint: Painless swelling over the right iliac region for 8 months
· Clinical Findings: Hard, non-tender mass fixed to the underlying bone

Investigations:
· X-ray (Pelvis – AP View): Revealed a well-defined, pedunculated bony outgrowth on the lateral aspect of the right iliac wing.
· MRI: Showed a cartilage-capped lesion measuring 3.2 cm in height with no signs of marrow or soft tissue invasion, ruling out malignant transformation.

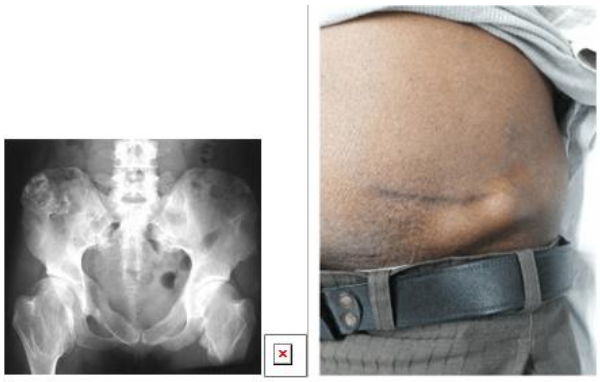

Fig1 Fig2

Fig1: show bony growth over iliac wing Fig2: shows swelling iliac region

Management
1)Surgical excision
Procedure: En bloc excision via an extraperiosteal approach under general anesthesia.
Positioning: Patient was placed in a lateral decubitus position to optimize exposure of the iliac wing.
Approach: A curvilinear incision was made over the right iliac crest, and soft tissues were gently retracted to expose the bony lesion.
Excision: The osteochondroma was removed with a high-speed burr to ensure complete removal including the cartilage cap and any bony stalk, minimizing the risk of recurrence.
Closure: The wound was irrigated and closed in layers; a drain was placed and removed after 48 hours.
Excision and biopsy was done.

2)Postoperative Care
Hospital Stay: 2 days for observation and pain management.
Mobilization: Early mobilization initiated on postoperative day 1.
Follow-Up: Monthly for the first 3 months, then at 6 months and 1 year. No recurrence or complications observed at 1-year follow-up.

3)Histopathology Report
Gross Examination:
A pedunculated bony mass measuring 3.2 × 2.5 × 2.1 cm with a cartilaginous cap of ~0.5 cm thickness.

Microscopic Findings:
-Outer cap composed of mature hyaline cartilage arranged in lobules.
-Underlying trabecular bone continuous with host bone marrow.
-No evidence of cellular atypia, binucleation, or increased mitotic activity.
-Findings confirmed benign osteochondroma, no malignant transformation.

• Intraoperative biopsy done and sent for pus culture and sensitivity, AFB/ZN :AFB/ZN staining and culture yielded no growth.
• Post operative Xray showed satisfactory excison with no fracture.

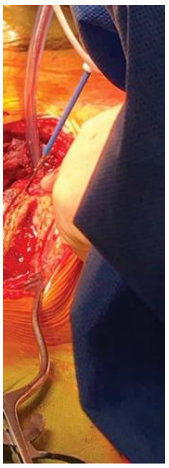

Fig3a

Fig 3b

Intraoperative image shows bony growth iliac bone (Figure 3a). The intraoperative biopsy was performed and the specimen was sent for Histopathological examination, pus culture and sensitivity, AFB/ZN stainin(Figure 3b)

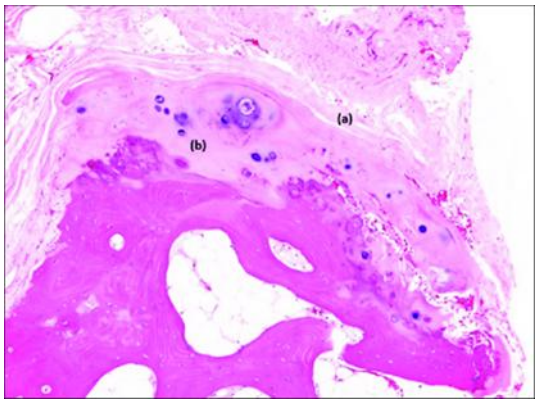

Fig 4 (Histopathology Reports Suggestive Of Osteochondroma With No Malignancy (Fig 4))

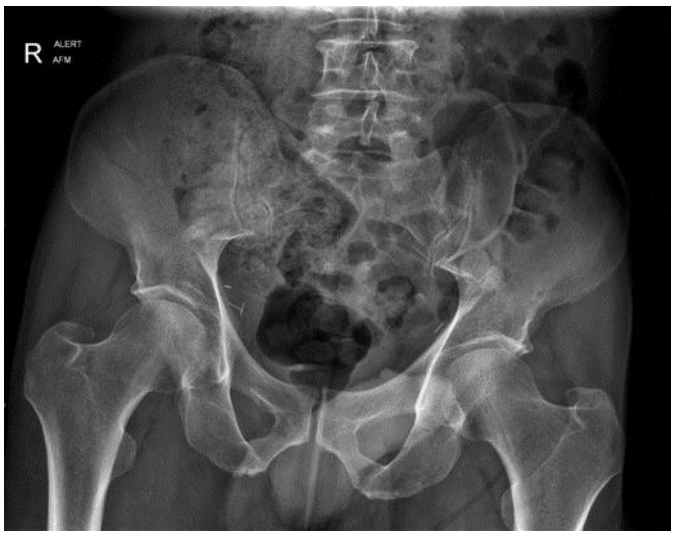

Fig 5
Post Operative Xray Showed Satisfactory Excison With No Fracture (Fig 5)

III. Discussion

Osteochondromas are developmental bone lesions rather than true neoplasms, arising due to aberrant cartilage growth at the metaphyseal region of growing bones. They represent the most common benign bone tumor and typically present during the first two decades of life. Although osteochondromas most frequently occur in long bones such as the distal femur, proximal tibia, and proximal humerus, flat bones like the scapula and pelvis are rarely affected, accounting for less than 5% of cases.

Pelvic osteochondromas, particularly those originating from the iliac wing, are uncommon and pose unique diagnostic and management challenges. The deep anatomical location may delay detection, and symptoms may only arise due to mass effect, such as pain, limited range of motion, nerve compression, or, rarely, bowel or bladder dysfunction. In our case, the patient presented with a painless swelling, which is typical, as many osteochondromas remain asymptomatic and are often incidental findings.

Radiographic evaluation is essential for diagnosis. Plain radiographs typically show a bony outgrowth with continuity between the cortical and medullary bone of the lesion and the parent bone. MRI is particularly useful in assessing the cartilage cap, which is crucial in evaluating the risk of malignant transformation. A cap thicker than 1.5–2 cm in adults may raise suspicion for secondary chondrosarcoma. In this case, imaging confirmed a cartilage cap under 0.5 cm with no concerning features.

Surgical excision is indicated when the lesion is symptomatic, growing, cosmetically concerning, or shows signs of potential malignant transformation. Complete removal of the lesion, including the cartilaginous cap and stalk, is critical to prevent recurrence. The extraperiosteal approach used in our case minimized periosteal stripping and reduced soft tissue trauma, facilitating quicker recovery.

Histopathological evaluation confirmed the diagnosis, with typical features including a mature hyaline cartilage cap, underlying trabecular bone, and lack of cellular atypia. Absence of mitotic activity or cartilaginous hypercellularity ruled out malignancy.

While the risk of malignant transformation in solitary osteochondromas is less than 1%, long-term follow-up is advisable, especially in lesions from atypical locations. Surveillance involves periodic clinical examination and imaging if new symptoms develop.

This case underscores the need for clinicians to maintain a high index of suspicion for unusual presentations of common bone tumors. Awareness of pelvic osteochondromas and their potential complications can lead to timely diagnosis and effective management, as demonstrated in this patient.

IV. Conclusion

Osteochondromas are benign bony outgrowths that most commonly affect the metaphyseal regions of long bones. However, their occurrence in the pelvis, particularly in the iliac wing, is exceptionally rare and may lead to diagnostic delays due to their deep location and often subtle or nonspecific clinical presentation.

This case highlights the importance of maintaining clinical vigilance when evaluating unusual bony masses in atypical locations, especially in young patients. Radiographic and MRI evaluation are indispensable tools in establishing a diagnosis and ruling out malignant transformation. In symptomatic cases, surgical excision remains the definitive treatment and, when performed completely, typically results in excellent outcomes with minimal risk of recurrence.

Histopathological confirmation is crucial to differentiate benign osteochondroma from more aggressive cartilaginous tumors. Our case reaffirms that with appropriate imaging, timely surgical management, and histological analysis, rare pelvic osteochondromas can be effectively treated with favorable long-term results.

Recognition of such rare presentations is vital not only for diagnosis and management but also to broaden clinical understanding and contribute to the limited body of literature on pelvic osteochondromas.

References

[1] Kulkarni SL, Mannual S, Daragad MS, Girirajaiah SH. Iliac Wing Osteochondroma In A 16-Year-Old Boy: A Case Report. Int J Res Orthop. 2020;6(6):1174–1177. DOI: 10.18203/Issn.2455-4510.Intjresorthop20205585

[2] Jain MJ, Kapadiya SS, Mutha YM, Mehta VJ, Shah KK, Agrawal AK. Unusually Giant Solitary Osteochondroma Of The Ilium: A Case Report With Review Of Literature. J Orthop Case Rep. 2023;13(11):42–48. PMID: 38025355

[3] Ali N, Bhat A, Bangroo FA, Sharma S. Isolated Osteochondroma Of The Iliac Wing: Case Report With Review Of The Literature. J Orthop Case Rep. 2014;4(4):31–34. DOI: 10.13107/Jocr.2250-0685.170

[4] Nekkanti S. A Rare Sessile Variant Of Osteochondroma Presenting At An Unusual Site Of The Iliac Wing In A 15-Year-Old Boy. HHM Global. Published July 5, 2017. Link

[5] Nekkanti S, Bhat A, Bangroo FA, Sharma S. Iliac Blade Osteochondroma: A Rare Case Presentation And Review Of Literature. J Orthop Case Rep. 2023;13(9):25–29. DOI: 10.13107/Jocr.2023.V13.I09.4595

[6] Kumar S, Singh S, Sharma S, Et Al. Rare Presentation Of Benign Osteochondroma: A Case Report. J Orthop Case Rep. 2020;10(2):42–46. DOI: 10.13107/Jocr.2250-0685.1611

[7] Ali N, Bhat A, Bangroo FA, Sharma S. Isolated Osteochondroma Of The Iliac Wing: Case Report With Review Of The Literature. J Orthop Case Rep. 2014;4(4):31–34. DOI: 10.13107/Jocr.2250-0685.170