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CHONDROBLASTOMA AFFECTING THE APOPHYSIS OF THE GREATER TROCHANTER IN A CHILD: A CASE REPORT

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ABSTRACT **Background:** Chondroblastoma is a rare, benign cartilaginous tumour characteristically arising in the epiphysis or apophysis of growing long bones. Apophyseal involvement of the greater trochanter is uncommon, and lesions in the proximal femur carry a comparatively higher risk of local recurrence. **Case Presentation:** A 14-year-old boy presented with a three-month history of right hip pain and difficulty walking. Examination revealed antalgic gait, tenderness over the greater trochanter, terminally painful internal and external rotation, and wasting of the right thigh musculature. MRI and plain radiographs demonstrated a well-defined lytic lesion with tiny internal calcification in the apophysis of the greater trochanter with adjacent bone marrow oedema. Intraoperative exploration revealed a 3 × 2 × 1 cm lesion confined to the greater trochanter, managed by curettage and excision. Histopathological examination confirmed the diagnosis of chondroblastoma. **Conclusion:** Chondroblastoma should be considered in the differential diagnosis of an adolescent presenting with chronic hip pain and a lytic apophyseal lesion on imaging. Although histologically benign, its locally aggressive potential warrants thorough curettage and close clinical and radiological follow-up.

KEYWORDS : Chondroblastoma, Greater Trochanter, Apophysis, Curettage

INTRODUCTION

Chondroblastoma is a rare, benign cartilage-forming neoplasm that accounts for approximately 1% of all primary bone tumours.[1] It typically arises in the epiphysis or epiphyseal equivalent of skeletally immature long bones, most commonly the proximal humerus, distal femur, and proximal tibia, and is seen predominantly in the second decade of life. Involvement of an apophysis, such as the greater trochanter, is distinctly uncommon.[2] Lesions situated in the proximal femur and pelvis are clinically significant because they carry a higher rate of local recurrence compared with chondroblastoma at other sites.[1,2] We present a case of chondroblastoma affecting the apophysis of the greater trochanter in an adolescent boy, treated by intralesional curettage, highlighting the clinical, radiological, and histopathological features of this rare presentation.

Case Report

A 14-year-old boy presented with a three-month history of pain over the right hip associated with difficulty walking. There was no history of trauma, fever, or constitutional symptoms. On examination, he had an antalgic gait. There was no visible swelling, but tenderness was noted over the greater trochanter. The range of motion at the hip was full, although terminal internal and external rotation reproduced pain. Wasting of the right thigh musculature was evident on inspection, consistent with disuse.

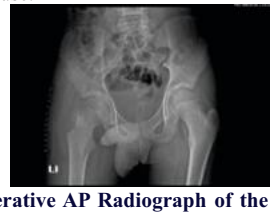

Figure 1: Preoperative AP Radiograph of the Pelvis Showing a Lytic Lesion in the Right Greater Trochanter.

Plain radiographs and magnetic resonance imaging (MRI) of the pelvis with both hips were obtained. MRI revealed a well-defined lytic lesion within the apophysis of the greater trochanter with tiny internal calcification, surrounded by adjacent bone marrow oedema, and disuse atrophy of the right gluteal musculature (Figures 1 and 2).

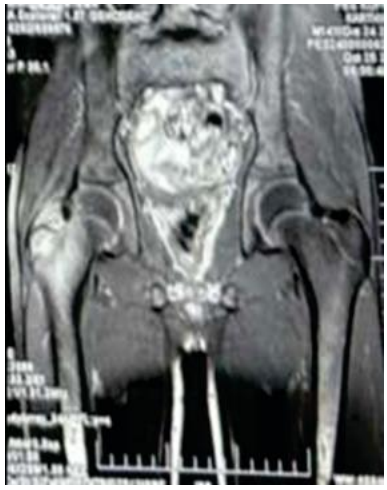

Figure 2: Coronal MRI Showing a Well-defined Lesion in the Apophysis of the Right Greater Trochanter with Adjacent Marrow Oedema.

Based on clinical and radiological findings, a provisional diagnosis of chondroblastoma was made and surgical excision was planned. Intraoperatively, a mass measuring 3 × 2 × 1 cm was identified,

confined entirely to the greater trochanter (Figure 3). Thorough curettage of the lesion was performed and the tissue was sent for histopathological examination.

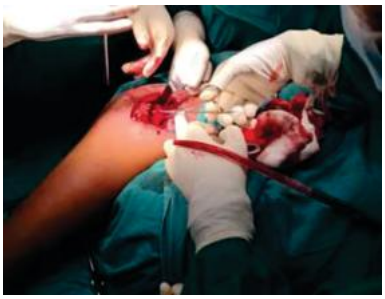

Figure 3: Intraoperative Photograph Showing Curettage of the Lesion at the Greater Trochanter.

Histopathological examination confirmed the diagnosis of chondroblastoma of the greater trochanter. The postoperative course was uneventful, and a postoperative radiograph confirmed adequate clearance of the lesion (Figure 4).

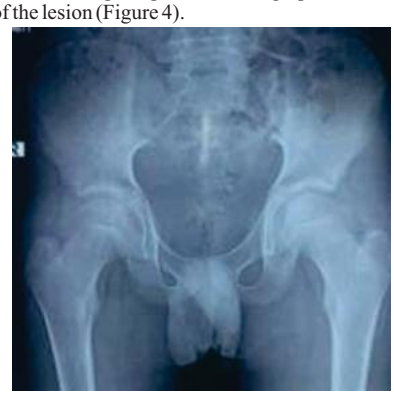

Figure 4: Postoperative AP Radiograph of the Pelvis Following Curettage and Excision.

DISCUSSION

Chondroblastoma is usually a slow-growing, benign tumour that may remain asymptomatic for a prolonged period.[1] When symptomatic, patients typically present with localised pain, tenderness, and restricted range of motion in the adjacent joint, as observed in the present case. While the characteristic imaging findings — a well-defined lytic lesion with internal chondroid calcification arising in an epiphysis or apophysis — are often sufficient to suggest the diagnosis, the differential includes giant cell tumour of bone and aneurysmal bone cyst, which can share overlapping clinical, radiological, and histological features.[1] Histopathological confirmation, as obtained in this case, remains essential for definitive diagnosis.

Surgery is the principal treatment for chondroblastoma. Aggressive curettage has been advocated even in lesions situated close to the growth plate, given generally favourable outcomes with this approach.[1] Apophyseal involvement of the greater trochanter is distinctly rare; our patient was managed successfully with curettage and excision, with an uneventful postoperative course. Laitinen et al., in a large single-centre series of 177 cases of chondroblastoma involving the pelvis and extremities, demonstrated that lesions in the proximal femur and pelvic region carry a comparatively higher risk of local recurrence, underscoring the importance of close long-term follow-up.[2]

CONCLUSION

Chondroblastoma of the apophysis of the greater trochanter is a rare entity that should be considered in an adolescent presenting with chronic hip pain and a lytic apophyseal lesion on imaging. Despite its histologically benign nature, the biological behaviour can be locally aggressive, particularly in the proximal femur and pelvic region. Adequate curettage and long-term radiological surveillance are essential to detect and manage local recurrence.

Acknowledgments

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Conflict of Interest

The authors declare no conflict of interest.

Source of Funding

None.

Patient Consent

Written informed consent was obtained from the patient's parent/guardian for publication of this case report and accompanying images.

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