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Case Report

Pubic Tubercle Osteochondroma

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Abstract

Background: The commonest benign bone tumors, osteochondromas, which can be solitary or multiple involving the metaphyseal region of long bones, rarely present in the axial skeleton, such as pelvic girdle, which warrants surgical excision in case of symptoms arising out of pressure effects.
Case Report: In this study, we are herewith reporting an unusual case of pubic tubercle osteochondroma, which is solitary and pedunculated in a 37-year-old woman. She has had the swelling for the past 15 years, which was asymptomatic except for mild hydroureteronephrosis, which was an incidental diagnosis; however, we managed the patient with surgical excision of the tumor with elaborate preoperative radiological imaging using both X-ray and computed tomography (CT) scan. Histopathological examination confirmed the diagnosis of osteochondroma.
Conclusion: Asymptomatic pelvic osteochondroma should be considered in patients with incidental swelling in the groin region, especially women who may be reluctant to seek medical attention due to social stigma.

Keywords: Osteochondroma; Bone; Surgical Excision; Solitary

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Background

Osteochondroma, the so-called commonest benign tumor due to developmental malformation, constitutes 20-50 percent of all benign bone neoplasm (1). Its usual presentation is either solitary or multiple, which in turn, is associated with a genetic predisposition. The commonest sites involved are the metaphyseal region of long bones like the distal femur, proximal tibia, proximal humerus, and other bones like the scapula, clavicle, ribs, and very rarely, the pelvic bone (2). This case report highlights the rare incidence of pubic tubercle pedunculated osteochondroma with asymptomatic hydroureteronephrosis.

Case Report

A 37-year-old woman came to the orthopedic out-patient department with complaints of low back aches for the past year. While examining the patient, she gave a history of swelling in the pubic region, which she noted at the age of 15 years. The swelling was insidious in onset, gradually increasing in size for one year, after which the swelling did not increase. The swelling was associated with pain for the initial six months, after which it became painless. The patient did not give any history of fever and loss of weight or appetite. She did not seek any medical advice for the swelling as the swelling became painless and did not increase in size after six months of appearance and also, she was reluctant to seek medical advice due to the site of the swelling.

On examination, there was a bony hard swelling of size 10 × 7 cm^2 over the left pubic region. The swelling had irregular borders, was not mobile, and the skin over the swelling was normal and pinchable. It was not pulsatile. There were no other swellings anywhere. No palpable lymph nodes were present.

Management and Outcome: Ultrasound abdomen showed a bony swelling in the left groin and left side mild to moderate hydroureteronephrosis. However, the patient did not have any urinary tract symptoms.

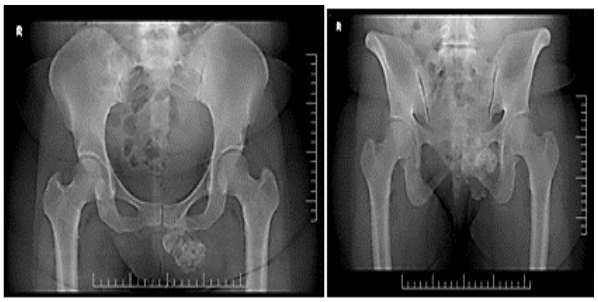

Figure 1. Preoperative X-ray showing the inlet and outlet views of the pelvis showing the osteochondroma

Radiological imaging [X-ray and magnetic resonance imaging (MRI)] of the pelvis showed osteochondroma arising from the pubic tubercle (Figures 1 and 2).

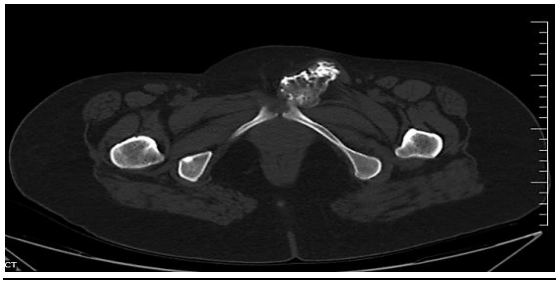

Figure 2. Computed tomography (CT) scan of the pelvis showing the pedunculated growth arising from the pubic tubercle

The patient underwent a needle biopsy of the bony outgrowth to confirm the diagnosis of osteochondroma. The histopathology was suggestive of the same (Figure 3).

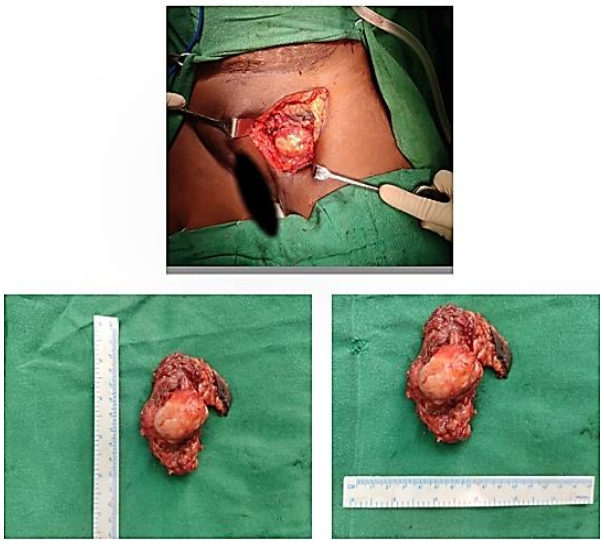

Figure 3. Intraoperative images and the gross anatomy of the excised tumor

The patient was then counseled for an excision biopsy of the tumor. Through the extended ilioinguinal approach, the tumor was exposed, excised in toto, and sent to histopathology.

The mass was measured around 5 × 6 cm^2 (Figure 4). The postoperative period was uneventful. The histopathological examination report was collected, corroborating the diagnosis of osteochondroma without undifferentiated cells. The patient was followed up for one year, and there was no recurrence of swelling.

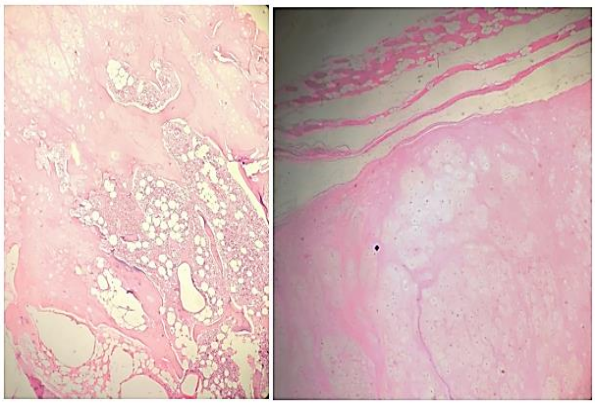

Figure 4. Left shows a bony lesion of the cap composed of mature hyaline cartilage. Right shows cartilage with a disorganized plate and focal areas showing ossification with areas of well-formed bone marrow and spicules of woven bone

Discussion

Of the common benign skeletal system tumors, osteochondroma plays a substantial role in presenting in the general population. The common age group is between the second and fourth decade (3). Though it is a common benign tumor, the etiology is still unknown and has not been explored very well (4). Osteochondroma presents in the growing age group, and the growth of the mass ceases with skeletal maturity. The commonest occurring sites are the metaphyseal region of a long bone, such as the distal femur, proximal tibia, and proximal humerus, which forms around 90% of the overall incidence of osteochondroma. The remaining 10% includes rare sites such as the axial skeleton, coccyx, and the pelvic bone (5).

In our clinical presentation, the tumor size has not increased progressively from 16 years of age until the presentation to the hospital (36 years). In view of this, the patient had no clinical symptoms pertaining to osteochondroma. However, she had symptoms pertaining to grade II spondylolisthesis, which eventually made her seek medical attention in the first place. Therefore, this observation has made us consider asymptomatic rare pelvic osteochondroma as a separate entity. Because of the social stigma, the patient was reluctant to get the groin swelling evaluated by the doctor for the past 20 years.

Solitary pelvic osteochondroma constitutes 5% of all osteochondromas (6). However, it does not need surgical intervention until it causes symptoms due to local pressure effects such as haematuria, dyspareunia, urinary incontinence, and urinary frequency with nocturia. In our case, the patient had hydroureteronephrosis in the ultrasound study but did not have any symptoms due to that. We did the surgical excision for cosmetic reasons as well as to prevent any future escalation of urinary tract symptoms due to the existing hydroureteronephrosis. There is a 2% chance of tumor recurrence after surgical resection.

Solitary osteochondroma has a 1% chance of malignant transformation to chondrosarcoma if the swelling progressively increases after skeletal maturity (7). To our knowledge, the malignant transformation of solitary pelvic osteochondroma has not been reported in any literature so far.

Conclusion

The sole aim of reporting this case is due to its unusual presentation of the site involving the pubic tubercle, which is in close proximity to pubic viscera, which might cause compression or neurovascular symptoms. Asymptomatic pelvic osteochondroma should be considered in patients with incidental swelling in the groin region, especially women who may be reluctant to seek medical attention due to social stigma.

Conflict of Interest

The authors declare no conflict of interest in this study.

Acknowledgements

Written informed consent was obtained from the patient for this case report.

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