

## Case Report

# A Rare Case of Pedunculated Osteochondroma of the Dorsal Surface of Scapula

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### ABSTRACT

Osteochondromas constitute 30-40 % of all benign bone tumours and is commonly seen at growing ends of long bones. However rarely they are seen in flat bones like scapula, pelvis, skull, scapula, small bones, etc. We describe a case of Osteochondroma on the dorsal aspect of scapula which was pedunculated and caused cosmetic problems besides difficulty in sleeping in supine position in a 13 year old male child. Osteochondromas do occur in flat bones like scapula and should be kept in mind while assessing such patients. Extra periosteal resection of such tumours is necessary to prevent recurrence.

**Keywords-** Osteochondroma, scapula dorsal surface

### INTRODUCTION

Osteochondromas are benign skeletal tumours and constitute 30 – 40% of all benign tumours. They are commonly seen at lower end of femur and upper end of tibia (growing ends of long bones), where there is bone growth.<sup>1</sup> Osteochondromas are relatively rare in flat bones like skull, scapula, pelvis, small bones etc. Osteochondromas are developmental lesions rather than true neoplasms. They can be solitary or multiple, sessile or pedunculated, symptomatic or symptomless. Pelvis (5%), scapula (4%) and spinal (2%) osteochondromas are reported and are rare.<sup>2</sup> Osteochondromas may be symptomatic due to compression of surrounding neurovascular structures or musculature or rarely due to malignant transformation (1% in solitary osteochondroma).<sup>3</sup> Winging of the scapula and mechanical blockage of free movements at the shoulder joint can occur.<sup>2</sup>

### CASE REPORT

We report a case of solitary osteochondroma involving the medial border of dorsal surface of scapula in a 13 year old boy who presented with complains of inability to sleep in supine position due to the tumour and cosmetic problems. The patient had a gradually enlarging mass for 3 months which was mildly painful which prevented him from sleeping comfortably. The mass did not affect his shoulder function or strength. Xrays and CT scan confirmed the diagnosis.

Patient was operated in prone position under general anaesthesia. A horizontal incision was taken over the tumour along the direction of the muscle fibres. Exposure of the tumour was done. Tumour was pedun-

culated. Using an osteotome the peduncle was osteotomised. Tumour was removed en-block. Base of the tumour was removed and using cautery adjoining perisosteum was resected to prevent recurrence. Bone wax was applied to the raw bone surface. Closure was done and sutures were removed after 10 days. Postoperatively patient was allowed all activities and the patient remained asymptomatic thereafter till last follow up. Histopathology of the tumour confirmed the diagnosis of Osteochondroma.

### DISCUSSION

Typical solitary Osteochondroma presents itself as a slow growing bony tumour with a cartilage cap from the metaphyseal area of long bone near its growing end, mostly around the knee joint between 5 – 15 years of age. Males are affected more than females.<sup>4</sup> Bony mass without pain is the most common presentation. Our case had a similar presentation. Multiple osteochondromas can be associated with various syndromes like diaphyseal achlasia and is a rare condition.<sup>4</sup>

The incidence of scapular osteochondromas in reported literature is about 3-4 % of all osteochondromas. However most of the cases described in literature were on the volar surface of scapula and most of them were sessile.<sup>5</sup> We report a case on the dorsal surface of the scapula. Nathan et al in 2010 described two dorsal scapular osteochondromas.<sup>6</sup> Yadkikar et al in 2013 and Salagia et al in 2013 also described similar tumours.<sup>7,8</sup> Jhadav et al also reported a similar case. Thus our case is among the rare few cases described so far in literature.



**Figure 1: Swelling over the right dorsal scapular area**



**Figure 2- Pedunculated bony mass arising from dorsal scapular surface (3D CT image)**



**Figure 3- Incision and exposure of mass**



**Figure 4- Lesion excised**

Lesions over bones like pelvis and scapula are better characterized on CT scans than plain Xrays.<sup>2</sup> MRI may be needed if a malignancy is suspected or there are signs of adjacent neurovascular structures compression.

The surgical approach is dictated by the location of the mass. A dorsally based incision paralleling the medial border of the scapula or a dorsally based incision along the scapular spine can be used.<sup>6</sup>

Malignant transformations are extremely rare in children and they are uncommon in adults. Malignant transformation may occur when the lesion involves pelvis and proximal femur when there is a sudden increase in growth in an adult who is more than 30 years of age. In malignant transformations, the cartilage thickness is more than 2cm.<sup>5</sup> Osteochondromas are more common on the ventral side of the scapula and can lead to various complications like bursa formation, pseudowinging of scapula, snapping syndrome and restricted movements of the shoulder.<sup>5</sup> In solitary osteochondroma local recurrence after resection is less than 2%.<sup>2</sup> Though we cannot comment on the recurrence of this tumour yet, the patient remains under close follow up for early detection of any recurrence.

## CONCLUSION

Osteochondromas do occur in flat bones like scapula and although rare, they should be kept in mind while evaluating dorsal scapular lesions. Extra periosteal

resection of such tumours is necessary to prevent recurrence.

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