

# Scapula a rare localization of osteochondroma: a case report

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## Abstract

Osteochondroma is the most common benign bone tumor, but flat bones that too scapula is rarely involved by it. We present the case report of this rare site of osteochondroma in the scapular region in a 17 years old female without any symptoms except for the cosmetic appearance.

## INTRODUCTION

Osteochondroma is the most common benign bone tumor, representing 15% of all bone tumors and 45.3% of all benign tumors of the bone[1,2]. The most common sites of occurrence are the long bones of the lower extremity(50%), usually the lower end of the femur and upper end of the tibia[3,4]. However, involvement of the small bones of the hand and other bones occurs in 10% of cases. An incidence of 5% in the pelvis and 4% in scapula has been reported[3].

These tumors are usually painless, but symptoms may result from complications such as mass effects that produce mechanical pressure, fracture of the bony stalk of the tumor, nerve impingement syndromes, malignant transformation of the cartilaginous cap and large bursa formation. The scapula being the uncommon site and there are few articles in the literature reporting such lesion [4].

We report the large sessile osteochondroma in a 17 years old female on the lateral border of right scapula.

## CASE REPORT

A 17 years old female patient presented to us with the swelling dorsolateral aspect of right scapular region of 1 year duration with history of progressive increase in size. On examination swelling was oval, lobulated, 8 x 6 cm, bony hard consistency, fixed to underlying scapula from the dorsolateral aspect. The movement at the shoulder joint is normal and neurovascular status was ok. No bony prominences are found elsewhere in the body.

Laboratory findings were within normal limit. X-rays examination showed a large sessile bony tumor arising from

the dorsolateral aspect. CT scan showed a mushroom shaped exostosis measuring 8x6x3 cm from the medulla of the outer aspect of right scapula. Adjoining soft tissue showed normal density.no lesion seen in both lungs.

Through the posterior approach and through the interval between infraspinatus muscle and the teres minor muscle the osteochondroma was resected extraperiosteally.

Microscopic examination also shows the findings suggestive of osteochondroma.

After follow up of one year we did not find any signs of recurrence.

## Figure 1

Fig-1 lobulated swelling over the dorsal aspect of scapula



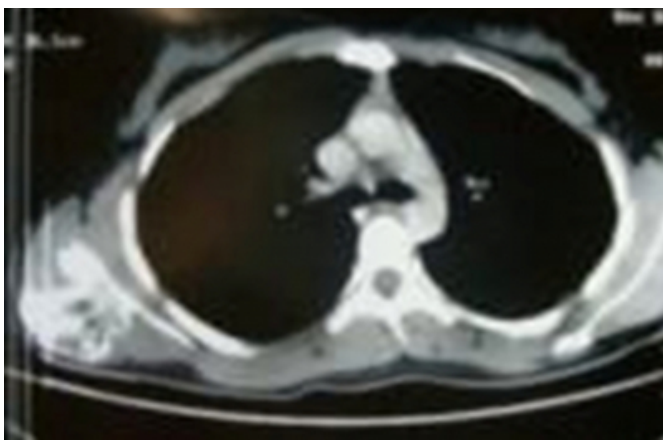
**Figure 2**

Fig -2 showing sessile osteochondroma on the outer aspect of scapula



**Figure 3**

Fig-3 CT scan coronal section showing mushroom shaped bony swelling arising from the outer aspect of the right scapula.



## DISCUSSION

Osteochondromas are primary bone tumours, which are usually located in the distal femur, upper tibia or upper humerus. Although the exact aetiology of the growth is not known, a peripheral portion of the physis is thought to herniate from the growth plate. This metaplastic cartilage grows to form the exostosis, which is connected to the bone by a thin stalk [4]. Patients having osteochondroma or exostosis most commonly present in the second decade of life, similar to the present case. A bony mass without pain is the most common presenting symptom. In other cases, diagnosis is made incidentally, based on radiographs. Pain is

generally uncommon and is due to pressure on the surrounding soft tissue, underlying bursitis, fracture of the stalk due to trauma or, rarely, malignant transformation [4].

Plain radiography is the main diagnostic modality. Anteroposterior and lateral radiographs are sufficient to characterize the lesion. In certain bones such as the pelvis and the scapula, a CT scan is useful to localize the lesion when planning resection as was done in this patient. MRI is needed only if malignancy is suspected.

Swelling was the most common clinical presentation reported. Winging of the scapula [8, 9], mechanical blockage of free movements at the shoulder joint can occur.

Malignant transformation of osteochondroma has been the principal concern, and its incidence in solitary osteochondroma is 1%. Malignant change is characterized by a sudden increase in the size of the tumour accompanied by pain. Thickness of the cartilaginous cap of osteochondroma is one of the predictors for this transformation. A cap thinner than 1 cm usually indicates a benign condition, whereas a cap between 1 and 2 cm may be considered questionable, and a cap thicker than 2 cm generally corresponds to malignant transformation [10]. Treatment of osteochondroma is achieved by resection of the tumour, including its stalk. Incomplete resection can lead to recurrence. In solitary osteochondroma local recurrence after resection is less than 2%.

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