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RESEARCH ARTICLE

A CASE OF LARGE OSTEOCHONDROMA OF PROXIMAL FIBULA: A RARE PRESENTATION

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Abstract

Osteochondromas are very frequent, typically present in adolescent years, during the final growth spurt, and most commonly occur in long bones. We present a case of large osteochondroma of proximal fibula in a 17- year old female who came with a large swelling over the upper part of the right leg for 9 years. Surgical excision of the mass was done and histologic examination confirmed osteochondroma. Upon follow-up the patient had no pain and had full range of right knee movement without pain.

Introduction:-

Osteochondromas are the most common benign bone tumors. Theyprobably are developmental malformations rather than true neoplasms and are thought to originate within the periosteum as small cartilaginous nodules. Most lesions are found during the period of rapid skeletal growth. About 90% of patients have only a single lesion. Osteochondromas may occur on any bone preformed in cartilage but usually are found on the metaphysis of a long bone near the physis . They are seen most often on the distal femur, the proximal tibia, and the proximal humerus. They rarely develop in a joint.Multiple hereditary exostoses is an autosomal dominant condition with variable penetrance.

They normally present as a painless mass though can cause symptoms secondary to formation of an overlying bursa due to friction, or to activityrelated discomfort. Very occasionally, the lesion may cause neuropathic symptoms due to compression of a nearby nerve or may fracture producing sudden pain. Here, we present a case of large osteochondroma in a 17-old female presenting with a large painful mass in the proximal part of right leg with restricted knee movement.

Case description

A 17-year-old female was presented to Orthopedics OPD with pain and swelling over the proximal part of right leg for 9 years.The swelling was insidious in onset, gradually progressive and was not associated with pain, but the patient complained of irritation and mass effect due to the swelling. The swelling was initially painless but had been associated with pain for the past 5months.On clinical examination a single solid, non-tender mass of size approximately 10cm*12 cm was noted. There was no local raise of temperature and no skin changes noted over the swelling. Knee movement was restricted. No signs of distal neurovascular deficit were noted.

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Fig 1:- Clinical photograph of the mass.

After clinical examination, a plain radiograph of full length of the leg with AP and lateral was done. Radiological examination reveals a cauliflower- like mass arising from the proximal part of the fibula. On further imaging, MRI was done and showed the mass to be a osteochondroma.

Fig 2:- Plain x- ray reveals cauliflower like mass arising from proximal fibula.

Surgical removal of the mass was done. Intra-operatively, a lobulated, firm mass was seen that arises from the proximal part of fibula. There was no infiltration into the surrounding structures. The entire mass was excised from the base, measuring 9cm x 7cm x6cm and was sent for histopathological examination.Microscopic examination reveals predominantly cartilaginous tissues. There is no evidence of malignancy and features are those of benign osteochondroma.

Fig 3:- Pre-operative draping.

Fig 4:- Intra-operative photograph showing isolation of common peroneal nerve.

Fig 5:- Intra-operative photograph showing the mass.

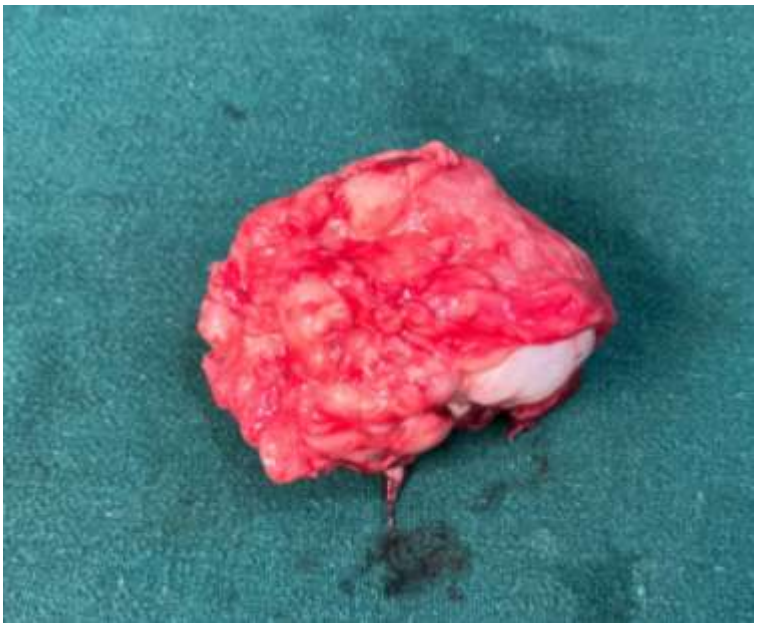

Fig 6:- Excised mass.

Discussion:-

Osteochondromas are usually thought to be benign bone tumors although they are more correctly thought of as developmental anomalies. They present as solitary (85% of cases) or multiple lesions in the context of hereditary multiple exostosis (in 15% of case), commonly in an autosomal dominant manner. They are typically asymptomatic and are discovered incidentally.

Fig 7:- Immediate post-operative radiograph.

The complications associated with osteochondroma are neurovascular compression, bursa formation, fracture and rarely malignant transformation. In our case, the pain was likely cause by the mass effect of the tumor. After the clinical and radiological examination, excisional biopsy was done, and follows-up at regular interval. In our case, there has been no recurrence in 6 months; however, we will be following upon the case on a regular basis to check for signs and symptoms suggestive of recurrence.

Conclusion:-

Osteochondromas occur most frequently in long bones near the metaphysis. The tumor can grow to a large extent without causing any symptoms, but the mass effect may occur in some cases. We report this case due its large size with mass effect. They are usually operated in cases of complications or due to cosmetic reasons. Recurrence of surgical removal may occur very rarely.

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