Surgical Excision Of A Large Sessile Osteochondroma Of The Lesser Trochanter Of Femur: A Case Report.

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Abstract

The presentation of osteochondroma lesion in proximal femur is infrequently encountered as most are usually asymptomatic. Here we present a case of large sessile osteochondroma from the lesser trochanter. A 24 year old male patient presented in our department with a large swelling around the right hip since 2 years. Plain Radiographs , Computed Tomography and Magnetic Resonance Imaging were performed to assess the exact site and extent of the lesion. Excision of the lesion along with the base of lesser trochanter was performed. The histopathological examination confirmed the nature of the tumor. The patient was kept non-weight bearing for a period of 4 weeks. The patient returned to his routine activities after a period of 6 weeks. At the latest follow up the patient was pain free and there was no evidence of any recurrence. Hence we emphasize that a removal of the mass along with the base of lesser trochanter will help in removal of islands of the lesion and help in preventing subsequent recurrence.

Introduction

Osteochondroma is a benign tumor that is caused by endochondral ossification of an abnormal island of cartilage adjacent to a physes. Although their frequency and presence may be difficult to characterize due to their asymptomatic nature, osteochondromas can be found as palpable masses that may cause pain due to overlying bursal inflammation, fracture through a pedunculated stalk, or impingement on an overlying structure. The fixed anatomic effects of solitary exostoses of the proximal femur have been well described in cases involving trochanteric bursitis, external snapping of the hip, and sciatic nerve compression, leading to either local treatment or surgical excision.

Case Report

A 24 years old factory worker presented with complaints of pain and swelling of right hip for period of around 10 months. Patient noted swelling which was of insidious onset and gradually increased in size over a period of 6 years. Patient also developed dull aching continuous pain, aggravated by activities and relieved by rest and analgesics. He had a significant restriction of his daily activities due to the mass effect of the tumor restricting the movement of the hip joint. There was no history of trauma or fever. Skeletal survey showed no other evidence of similar lesion in the patient.

On examination, patient had no evidence of any systemic illness. Local examination revealed a diffuse, ill-defined, hard, globular swelling of about 18 x 15 cm was found arising just below the inguinal region. Surface was irregular, hard in consistency with ill-defined borders. Skin over the swelling was normal. There was no localized lymphadenopathy and distal neurovascular deficit. There was no evidence of any laboratory abnormalities. Plain Radiographs, CT scan and MRI were done and reports suggested it to be osteochondroma. Hence an decision for performing a complete excision along with frozen section evaluation of the tumor was made. A medial approach along the intervals of adductor longus and gracilis was used. After complete dissection of the tumor, base of the lesser trochanter was osteotomized and the tumor removed en masse.

The patient was kept partial weight bearing for a period of 4 weeks. At the end of 6 weeks the patient had returned to his daily routine activities. The patient was followed up once in two months for a period of 6 months and then once in 6 months for a period for a period of four years. At the end of follow up of 4 years patient is completely asymptomatic and the Radiographs and MRI showed no evidence of local recurrence.
Discussion

Most patient with osteochondroma presents usually for cosmetic reasons, pain or restriction in movements due to mass effect. Few may also have limited range of movements, cosmetic problems, bursitis, compression neuropathy, vascular involvement or leg length discrepancy. Many studies in the past show that excision of asymptomatic osteochondroma results in inferior patient satisfaction though the morbidity of the excision of symptomatic osteochondroma has been shown to be comparable with that of the removal of hardware. Since the risk of malignant transformation of these lesion are high, it is important to consider surgery in patients with radiographic or imaging evidence of malignant change, however, minimal. Also, delay in surgery may jeopardises the outcome.

In a report of 408 osteochondromas the incidence of malignant change was described as 13% in patients with multiple osteochondromas. Although in the past studies have shown malignant change in up to 25% of patients. Aprin, Riseborough and Hall who showed that 8 of 12 chondrosarcomas in adolescent patients were in the proximal femur or pelvis. Although osteochondromas of the proximal femur and acetabulum are mainly followed up because of the risk of malignant change, a periacetabular osteochondroma may cause acetabular dysplasia and a proximal femoral osteochondroma may cause coxa valga and overgrowth of the femoral neck. Weiner and Hoyt identified coxa valga and increased femoral anteverision in 25 patients with osteochondroma adjacent to the lesser trochanter.

Having experienced a major vascular complication after the resection of an osteochondroma of the proximal femur, Tschokanow recommended the use of two separate incisions (Watson Jones and Smith-Petersen) in a one- or two-staged procedure. Although the most severe complication, an intra-operative fracture with failed osteosynthesis and subsequent total hip replacement occurred during the resection of an osteochondroma of the femoral neck, most patients underwent excision without complications using a single standard incision. Siebenrock and Ganz recommended a versatile surgical approach with dislocation of the femoral head for osteochondroma of the femoral neck. While this approach offers excellent exposure, there may be an increased risk of necrosis of the femoral head. As seen in the current study, most osteochondromas of the proximal femur can be removed using a single incision, but careful preoperative planning and intraoperative fluoroscopy are required. Of the 114 patients presented by Humber et al there were two patients with a recurrent solitary osteochondroma requiring a second resection who were less than 4 years of age. It has been suggested that incomplete removal of the cartilage cap is responsible for local recurrence, but young age at the time of surgery may be an additional prognostic factor.

Almost all studies conclude that surgery is the mainstay of therapy for symptomatic osteochondroma. A complete excision is mandatory in the treatment of osteochondroma, in few studies it is seen that despite good oncological results, major or partial deficit of function is unavoidable after the conventional wide excision with replacement by a metal prosthesis.

Conclusion

In conclusion, osteochondroma can be effectively treated by complete excision and symptoms will usually be relieved by surgery. Major complications and local recurrence are rare if done meticulously. Hence we suggest that patients with osteochondroma in high risk sites should be followed at regular intervals with appropriate investigations which will lead to identification of early malignant transformation and initiation of appropriate management. This will significantly result in improvement in functional outcome and serve to reduce morbidity in these patients.

References

Illustrations

Illustration 1

Plain Radiograph Anteroposterior view of the proximal femur

Illustration 2

Excised Tumor mass
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