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Case Report

Surgical management of osteoid osteoma of proximal femur- A case report

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Abstract: A 14 year old male presented with nocturnal proximal right thigh pain of 6 months duration. Pain was relieved with salicylates and NSAIDS. clinically and roentgenographically, a diagnosis of osteoid osteoma was made. Surgical excision was opted for and the excised lesion sent for HPE. HPE report was in concurrence with the clinical diagnosis. Surgical excision with C-arm targeting gives excellent results in the management of the benign osteoid osteoma lesion with minimal patient morbidity.
Keywords: Benign Bone Tumour, Osteoid Osteoma, Surgical excision.

INTRODUCTION:

We describe here a case report of a 14 year old male who reported with right proximal thigh pain. Osteoid osteoma was first described by Jaffe in 1935 and is a benign osteoblastic lesion characterized by a nidus of osteoid tissue, constituting about 10% of all benign tumors [1, 2]. Osteoid osteoma occurs in the young, usually between ages of 10 to 35 years, with a male preponderance [3, 4]. In over 50% of the cases, it finds its presentation in the diaphysis of tibia or femur. The proximal femoral site is most often affected [5]. The clinching clinical symptom is pain which is nocturnally severe and responds promptly to salicylates or other NSAIDS [5]. The cause of the pain is due to the prostaglandins and prostacyclin secretions PGE_2 and PGI_2, which are about 30 times the normal levels in the bone [6, 7]. Osteoid osteoma is diagnosed clinically and radiologically.

CASE REPORT:

A 14 Year old male, presented with nocturnally severe proximal right thigh pain of 6 months duration. It had been treated on and off with NSAIDS with partial relief and prompt return of pain, on its discontinuance. Physical examination did not reveal anything spectacular.

Radiographic finding:

Roentgenogram of the proximal right femur showed an elliptical lucency in the medial proximal femoral cortex with a zone of surrounding sclerosis. [Fig 1]

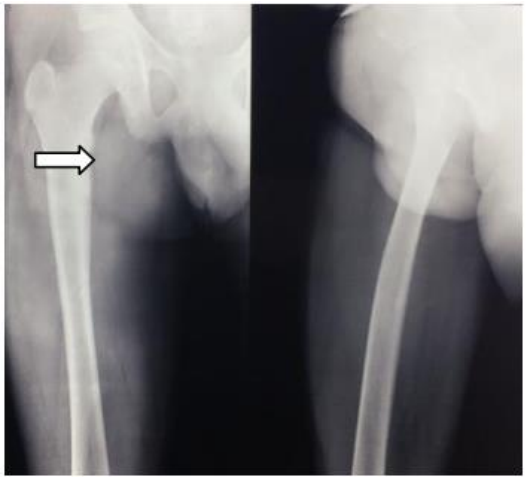

Fig 1: Pre-op x-ray showing the lesion in proximal Right medial femoral cortex.

CT Scan revealed a diffuse cortical thickening and a solid periosteal reaction, seen involving medial proximal femoral cortex of the right side measuring about 7 cms. Internally a lytic lesion of 11 X 4 mm was noted with a thickened medial cortex and a dense nidus of 5.1 X 2.6 mm within. [Fig 2 a and 2b]

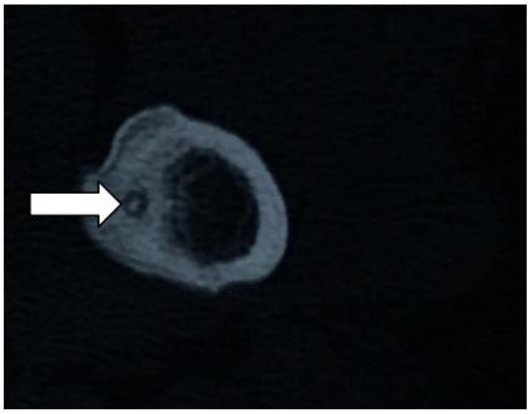

Fig 2a: Showing the nidus [CT Saggital cut]

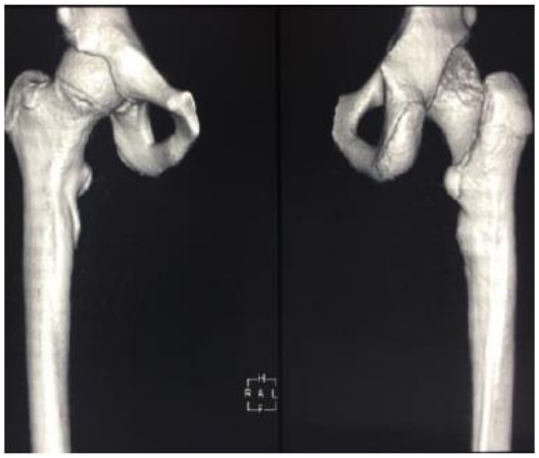

Fig 2b: Showing periosteal reaction and adjacent Cortical thickening [CT 3D recon]

Surgical procedure

After preparation and drape, patient under spinal anesthesia, the lesion was located by targeting it with a K wire, under fluouroscopic guidance [Fig3]. Through an 8 cm incision, the lesional site was approached, the periosteum elevated and through multiple drill holes, the lesion was excised, curetted and filled with bone wax [Fig 4]. The wound was closed in layers over a drain. The lesion was sent for HPE and the report revealed anastomosing, irregular trabaculae, with sclerotic nidus of woven bone with variable minerlisation, with presence of frequent osteclasts and with loose fibro vascular stroma. Post operative period was uneventful. Patient was relieved of the pain after the surgery. There was no relapse of symptoms at 18 months of follow up.

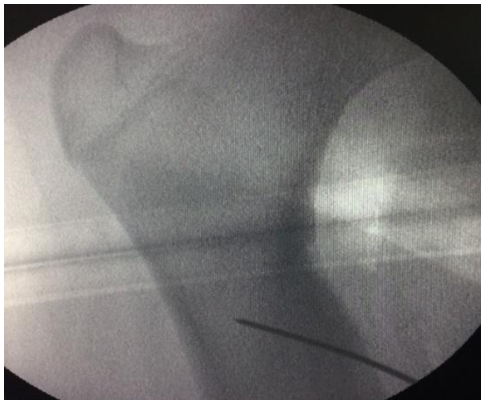

Fig 3: K-wire targeting the lesion

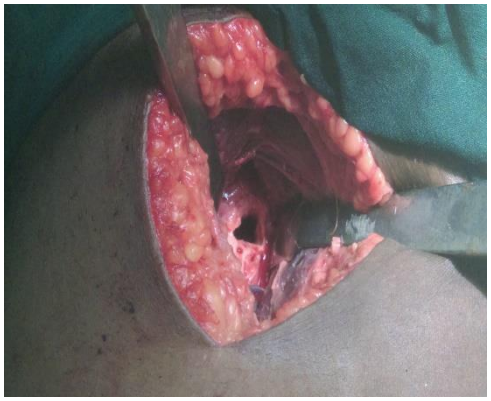

Fig 4: Showing the lesion exposed intraoperatively

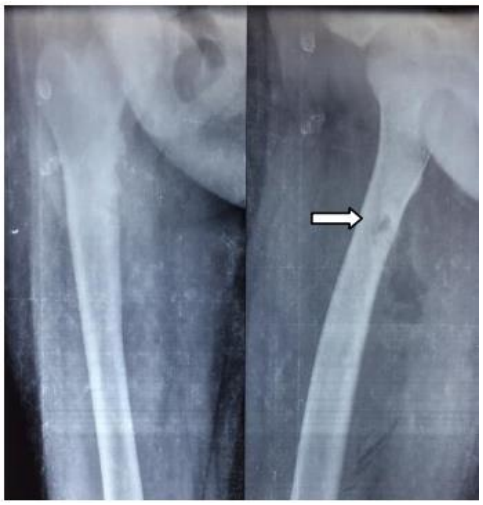

Fig 5: Post op x-ray- Lesion excised

DISCUSSION

There are different treatment options for osteoid osteoma – they are conservative, surgical and percutaneous technique like radiofrequency ablation [8]. Osteoid osteomas can be treated conservatively with NSAIDs because osteoid osteomas do undergo spontaneous regression after several years [9, 10]. The classical treatment is the complete surgical excision if conservative measures fail or if the pain is persistently severe [11, 12].The surgical procedure usually entails

complete excision of the tumour to ensure the entire excision [12]. This sometime causes structural weakness of the bone and requires about 6 to 8 weeks of non-weight bearing and activity restriction [13, 14]. The clinical success rate of surgery ranges from 88 to 100 %. [15]. Especially after the availability of C- arm imaging, targeting the lesion has become easier and excision of lesion has become more precise, with very few instances of relapse.

CONCLUSION

In experienced hands, the outcomes of C-arm guided surgical excision has been exceptionally good, with the only disadvantage being to have the patient remain non weight bearing for 6 to 8 weeks, which is acceptable considering the advantage of prompt relief of pain , which at times can be so debilitating as to interfere with the ADL of the patient.

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