Case Report

Osteoclastoma Symphysis Menti: A Rare Entity

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A 3 years old girl presented to our ENT Department with two months history of progressively enlarging swelling over the chin. It extended intra-orally and involved the floor of the mouth. There were no clinically palpable neck nodes. Radiologically, osteolysis of the mandible was noted. Histopathology of the initial incisional biopsy revealed numerous multinucleate giant cells scattered in a fibrovascular stroma. The child underwent surgical resection with titanium plate reconstruction of the defect and had uneventful postoperative course.
KEY WORDS: Osteoclastoma. Giant cell tumour. Symphysis menti tumours.

Introduction

Osteoclastoma or giant cell tumour is a relatively rare benign intra-osseous lesion. It accounts for 4-9.5% of all the bony tumors. Metastasis occurs very rarely and when does, lungs are the usual site of involvement. Osteoclastomas are most commonly reported between third to fourth decades of life and is slightly more predominant in females. Head and neck region is quite an unusual site of involvement by osteoclastomas and their share in head and neck region is only 5-6%. Out of these, mandible is the commonest site with 68% incidence.[1-3]

The diagnosis is primarily based upon the radiological and the histopathological findings of the lesion. Radiographically, the typical bearded appearance of the mandible due to osteolysis is suggestive of an osteoclastoma. Similarly, the numerous multinucleate giant cells scattered in a fibrovascular stroma is the pathognomonic histopathological feature of an osteoclastoma. [1-3]

We report our case in a 3 years old girl who presented to us with a locally advanced lesion. This rare presentation of the lesion in the pediatric age group at such an unusual site, prompted us to report our case and share our management experience.

Case Report

A 3 years old girl, presented to us with two months history of a progressively enlarging swelling over the chin, causing facial asymmetry and difficulty in chewing. On examination, there was a huge swelling measuring about 10 x12 cm in size in the region of symphysis menti. It had a smooth overlying mucosa extending to involve the floor of the mouth and pushing the tongue upwards and backwards. (Figure I) There weren't any clinically palpable neck nodes however.

Figure I: The tumor measuring 10×12 cm in size.

Three dimensional reconstructions of the computed tomography were done, that showed the typical features of osteolysis in an osteoclastoma. (Figure II) Histopathology of the initial incisional biopsy revealed numerous multinucleate giant cells scattered in a fibrovascular stroma showing mild to moderate atypia. (Figure III)

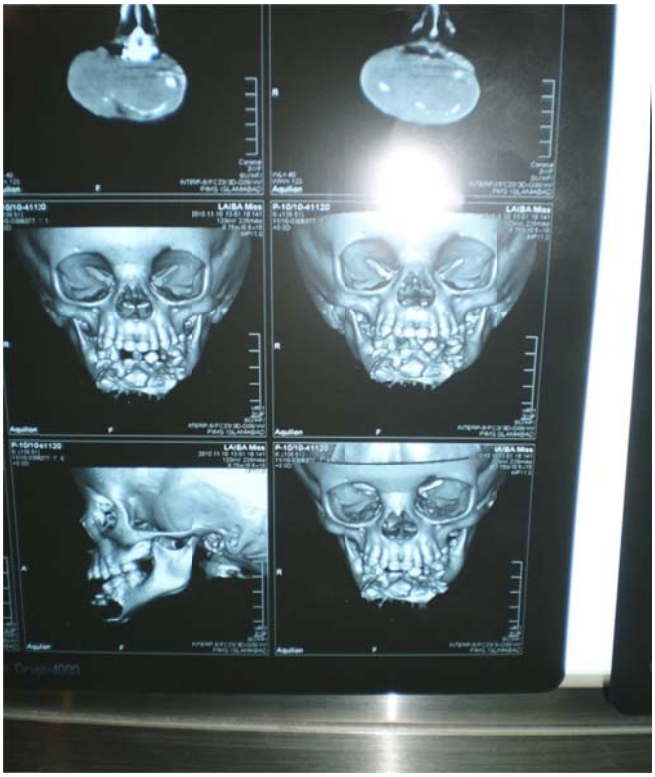

Figure II: CT Scan image showing osteolysis.

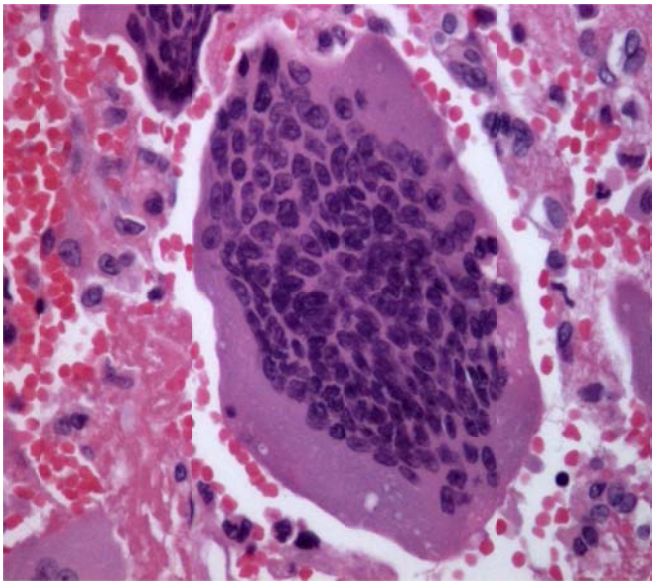

Figure III: Micrograph of the resected specimen showing a multinucleate giant cell in a fibrovascular stroma.

All baseline investigations were performed and found within normal range. The haemoglobin was11.1 g/dL, Serum urea was 18mg/dL, and serum creatinine was 0.8 mg/dL. X-Ray Chest was normal.

After establishing the diagnosis, surgical excision of the tumor was carried out under general anaesthesia. An inverted T-shaped incision was employed to make a vertical median lip splitting. A midline mandibulectomy was carried out. Titanium Plates were used to stabilize the free edges of the resected mandible. Soft tissue reconstruction was done by direct closure. The wound healed within two weeks post-operatively without any complications. (Figure IV)

Figure IV:- Postoperative photograph at 2 months follow up.

Discussion

Osteoclastoma is a very rare intra-osseous lesion. The involvement of the pediatric age group, as in our case report, along with the presentation in the head and neck region was another unique feature of the disease in our patient. Osteoclastoma accounts for 4-9.5% of all the bony tumors. It is commonly reported in the third decade of life. Its incidence in the head and neck region is also very low. [4-6]

The diagnosis of an Osteoclastoma is based upon the radiological findings and the histopathological findings of the biopsy. The differential diagnoses include giant cell granuloma, fibrosseous lesions, aneurismal bone cyst, odontogenic myxomas and vascular bone lesions etc. Surgery is the mainstay of treatment and the surgical options include resection of the tumor and reconstruction with titanium plates, Curettage alone and Curettage and bone grafting. [5-10]

Our case presented with stage 3 tumour. Osteoclastoma is classified into the following three stages: (a)- Stage 1: known as the latent stage, characterized by destruction of the outer surface of bone only. (b)- Stage 2: known as the active stage, where the cortex or the outer layer of bone is lost. (c)- Stage 3: known as the aggressive stage, accounting for 20% of all the cases of giant cell tumors. In this stage, the tumor rapidly extends beyond the bone into the soft tissues. [8-10]

Conclusion

Osteoclastoma should be kept in mind as one of the differential diagnose in a child presenting with a large tumour at the chin. Appropriate diagnosis and management would lead to an acceptable outcome.

References

1. Mendenhall WM, Zlotecki RA, Scarborough MT, Gibbs CP, Mendenhall NP. Giant cell tumour of the bone. Am j Clin Oncol. 2006;96-9
2. Faisham WI, ZulmiW, Halim AS,Biswal BM, Mutum SS, Ezane AM. Aggressive giant cell tumour of bone. Singapore Med J.2006;47:679-83
3. Tobon-Arroyave SI, Franco-Gonzalez LM, Isaza Guzman DM, Florez-Moreno GA, Bravo-Vasquez T, Castaneda-Pelaez DA. Vieco-Duran. Immunohistochemical expression of RANK GR alphaand CTR in central giant cell tumour of the jaws. Oral Oncol.2005;41;480-8
4. Cai G, Ramdall R, Garcia R, Levine P. Pulmonary metastasis of giant cell tumour of the bone diagnosed by fine needle aspiration biopsy. Diagn Cytopathol.2007;35:358-62
5. Regezi JA. Odontogenic cysts and odontogenic tumours, fibrosseous and giant cell lesions of the jaws. Mod Pathol.2002;15:331-41
6. Cooper AS Travers B. Surgical essays. London England. Cox Longman & Co.1818;178-9
7. Dahlin DC. Caldwell lecture giant cell tumour of bone: highlights of 407 cases.AJR AMJ Roentogenol 1985:144(5):955-65
8. Dziukowa J:Giant Cell Tumours of Jaw bones. Novotomory,24(3):173-180,1974
9. Csiba A: Giant cell tumours of mandible Fogorv.Sz,75:289-295,1988
10. Ajagbe HA,Samuel I, Daramita JO; Giant cell tumors of maxilla; Report of a case-oral Surgery, 1978.46:759-764