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Case Report

Myxofibroma of the soft tissue of face

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Introduction

Myxoma is described by WHO as a locally invasive neoplasm usually involving the jaw bones, typically occurs between the second and fourth decades and is more common in females.¹ This tumor may comprise 3%–6% of odontogenic tumors.²

It is locally aggressive, infiltrating in nature and is a non-encapsulated benign tumor essentially of the jaw bones with two thirds of the cases occurring in the mandible and one third in the maxilla. Myxomas of the soft tissue of the face are very rare.^{1,2}

We present an unusual case of myxofibroma occurring in a 63-year-old lady involving the soft tissue of the face.

Case report

A 63-year-old female patient reported to the Department of Dental Surgery, AFMC, Pune, in the month of July 2011 with history of a gradually increasing swelling on the lower half of face, in relation to the left lower border of the mandible for the past 1 year (Fig. 1). On examination, the swelling was 2 × 2 cm in size, ovoid in shape, movable, firm in consistency with no associated pain. The skin overlying the swelling was intact. There was no intra-oral component. Past medical history was non-contributory. Hematological and biochemical investigations were within normal limits. Orthopantomograph showed no bone or tooth involvement (Fig. 2). The swelling was enucleated easily and sent for histopathological examination. Per-operatively, there was no bone involvement.

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Fig. 1 – Swelling in relation to left lower border of mandible.

Gross pathology of specimen showed a whitish-gray glistening to gelatinous mass with minimal true encapsulation. Histologically, the mass was composed of spindled to stellate-shaped cells in a mucoid-rich intercellular matrix. Many of the cells showed fine, long anastomosing processes that tended to intermesh. Occasional strands of collagen were found. Few endothelial-lined blood vessels were seen. No epithelial rests or inflammatory infiltrate was present (Fig. 3). The mucoid-rich extracellular matrix showed positive staining for Alcian Blue and periodic acid Schiff. Immunostaining of the stellate cells showed uniform positivity with vimentin and patchy staining with smooth muscle actin. The cells were negative for desmin and S100. The final diagnosis was given as a myxofibroma.

Discussion

Myxoma, also known as odontogenic myxoma, myxofibroma and fibromyxoma involves the jaw bones and consists of rounded and angular cells that lie in an abundant mucoid stroma.¹ The origin of OM is believed to be odontogenic ectomesenchyme of a developing tooth or undifferentiated mesenchymal cells in the periodontal ligament. Some authors had previously associated its origin with a myxomatous

Fig. 2 – OPG shows no bony involvement.

Fig. 3 – Loosely arranged stellate and spindle-shaped cells scattered throughout the myxoid ground substance.

change of an odontogenic fibroma or residual foci of embryonic tissue.^{2,3}

It can be divided into two groups: tumors that arise specifically in jaw bones (the most common type) and those that arise in soft tissues (non-tooth bearing) of that area. It is a slow-growing tumor consisting of an accumulation of mucoid/myxoid ground substance with little collagen, the amount of which determines whether it can be called a myxofibroma.^{3,4} Myxoid tumors of soft tissue represent a heterogeneous group of lesions that exhibit significant differences in biologic behavior, ranging from harmless to malignant neoplasms.⁵

Odontogenic myxomas are found predominantly in the bone of the jaws and are considered slow-growing tumors with the potential for extensive bone destruction, cortical expansion, and a relatively high recurrence rate.⁶ Histologic features were probably first described by the German pathologist Rudolph Virchow in 1863, though the description was not specific to the jaws. Thoma and Goldman described myxomas of the jaws in 1947.⁷

The majority of tumors occur in the second to fourth decade.^{1,8} In the study of 33 cases by Simon et al the mean age was 26 years.⁸ A clinicopathological study of 25 cases by Tie-Jun Li et al revealed that the age ranged from 6 to 66 years with the mean age reported as 28 years.⁹ In this study, only one case was below 10 years and one case above 50 years. In our case, the age was 63 years which is highly unusual.

Tie-Jun Li et al reported that, the tumor occurred with equal frequency in both mandible and the maxilla with predilection for the premolar-molar area.⁹ All the posterior tumors in both the mandible and maxilla tended to be large and destructive. Only one tumor showed unilocular radiolucency; the rest showed multilocular features with characteristic 'wispy' trabeculae or soap-bubble appearance. In our case, radiographic features were discrete with no bony involvement with the tumor occurring in the non-tooth bearing area i.e., the soft tissue of the posterior mandible. Most cases show features like pain, swelling and mobility of teeth. In our case, the patient complained of swelling only.

The histological features of spindled to stellate-shaped cells in a mucoid-rich intercellular matrix seen in our case are characteristic of this tumor. Other benign jaw tumors that can give rise to histological differential diagnostic problems are desmoplastic fibroma and odontogenic fibroma. The former can be distinguished by its compact whorling fibrous fascicles and threadlike nuclei. The latter is more fibrous, is encapsulated, and lacks the stellate-shaped cells typical of myxoma.

The unusual features of this case are the site of the tumor, which was localized to the non-tooth bearing area of the mandible and the age of the patient. There are only two cases reported in patients above 50 years.

The treatment of the tumor ranges from conservative approach to radical surgery which can be quite distressing. Despite the fact that odontogenic myxomas show aggressive local growth it is believed that it never undergoes malignant transformation or gives rise to metastasis.¹⁰ It is suggested that the patient be followed up for at least 2 years, as this is the most likely time for recurrence. With adequate surgical excision, good prognosis can be expected.

Conflicts of interest

All authors have none to declare.

REFERENCES

1. *Oral Maxillofac Surg Clin North Am.* 2004;16(3):364–374.
2. Heichart Peter A, Philipsen Hans P. *Odontogenic Tumors and Allied Lesions.* Quintessence Publishing Co Ltd; 2004: 189–198.
3. Farman AG, Nortje CJ, Grotepass FW, Farman FJ, Van Zyi JA. Myxofibroma of the jaws. *Br J Oral Surg.* 1977;15:3–18.
4. Keszler A, Dominguez FV, Giannuzio G. Myxoma in childhood. An analysis of 10 cases. *J Oral Maxillofac Surg.* 1995;53:518–521.
5. Graadt van Roggen JF, Hogendoorn PCW, Fletcher CDM. Myxoid tumors of soft tissue. *Histopathology.* 1999;35:291–312.
6. Wong GB. Large odontogenic myxoma of the mandible treated by sagittal ramus osteotomy and peripheral ostectomy. *J Oral Maxillofac Surg.* 1992;50:1221–1224.
7. McClure DK, Dahlin DC. Myxoma of the bone: report of 3 cases. *Mayo Clin Proc.* 1977;52:249–253.
8. Simon ENM, Merks MAW, Vuhahula E, Ngassapa D, Stoelinga PJW. Odontogenic myxoma: a clinicopathological study of 33 cases. *Int J Oral Maxillofac Surg.* 2004;33:333–337.
9. Li TJ, Sun LS, Luo HY. Odontogenic myxoma: a clinicopathologic study of 25 cases. *Arch Pathol Lab Med.* 2006;130:1799–1806.
10. Barros RE, Dominguez FV, Cabrini RL. Myxoma of the jaws. *Oral Surg Oral Med Oral Pathol.* 1969;27:225–235.