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CASE REPORT

Giant Cell Angiofibroma: A Rare Tumour in the Oral Cavity

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ABSTRACT

Giant cell angiofibroma (GCA) was first described as a distinctive orbital soft-tissue tumour. It is now recognised that this rare tumour can present in other anatomical regions including the oral cavity. Here, we report a case of a 26-year-old male with a primary complaint of a painless solitary swelling on the right buccal mucosa. The lesion was surgically excised and a diagnosis of GCA was made based on light microscopy and immunohistochemical (IHC) studies. At present, local excision with long-term follow-up seems to be the most appropriate management modality. To the best of our knowledge, only four cases of GCA arising in the oral cavity were reported in the literature.

Keywords: Giant cell angiofibroma; giant cell fibroblastoma;solitary fibrous tumor; immunohistochemistry; case report; Oman

INTRODUCTION

Giant cell angiofibroma is a benign mesenchymal soft tissue tumour that commonly occurs in the orbital region.[1] However, it is recognised that this lesion can also occur in other locations including oral cavity. There are only four cases of GCA within the oral cavity reported in the literature.[2,3,4,5] In this paper, we present a case of GCA affecting buccal mucosa describing clinical, histopathological and IHC features.

CASE REPORT

A 26-year old male reported to the maxillofacial clinic with chief complaint of a painless swelling on the right side of the lower jaw. The swelling has been present since the past three years with slowly progressive increase in size. Clinical examination revealed an extra-oral firm swelling on the right side of the lower jaw. Intraorally there was a raised, painless, sessile, nodular lump measuring 25 mm and located in the right buccal mucosa. Our clinical diagnosis was a benign neoplasm such as lipoma. The lesion was surgically excised via intraoral approach and the specimen was submitted for histopathological examination. (Figure 1, 2)

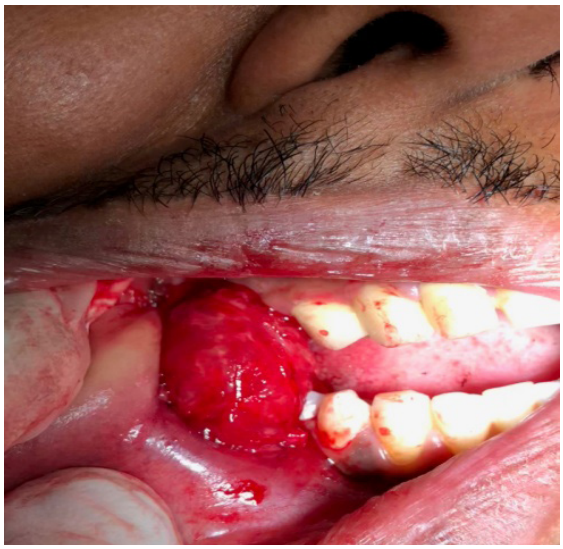

Figure 1. Surgical exposure of the lesion.

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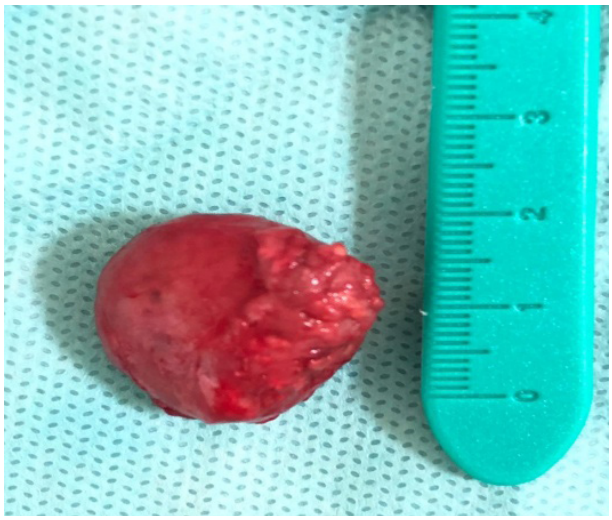

Figure 2. Excised specimen.

Pathological findings

On gross examination, the specimen was ovoid in shape and red in color showing a well encapsulated lesion. Microscopic examination revealed circumscribed cellular spindle cells with interspersed staghorn vessels. (Figure 3) The neoplastic cells were spindly with a storiform architecture. They were medium in size, oval with vesicular nuclei. In addition, there was occasional multinucleate giant cells, a sprinkling of lymphocytes and scattered collections of foamy macrophages. Immunohistochemistry (IHC) showed positivity of the neoplastic cells for Vimentin, SMA, CD34 and CD99 but negative for other markers. After 4 months of follow-up no recurrence was observed.

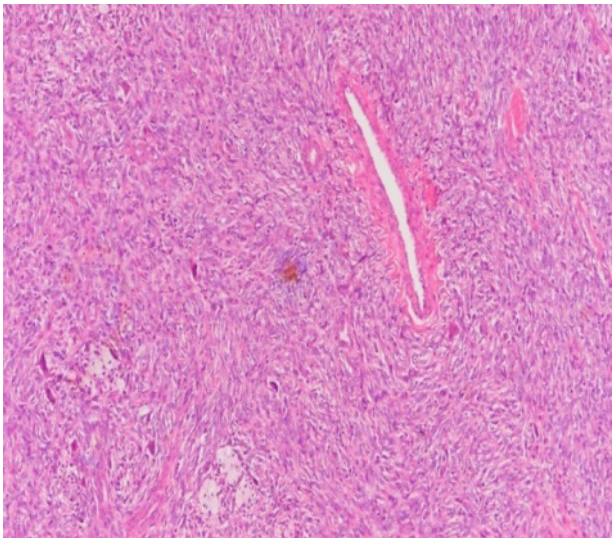

Figure 3: A. Photomicrograph showing neoplastic spindle cells with a storiform architecture with interspersed staghorn vessels (H&E X10 magnification).

DISCUSSION

GCA is a benign tumour that was first described in 1995 by Dei Tos et al.[1] as a distinctive orbital tumor occurring exclusively in male adults. However, this tumour can also present in other locations, and many cases reported in extra-orbital sites.[6,7,8] Only four cases occurring in the oral cavity reported in the literature, three arising in the buccal mucosa, and other affecting the gingiva.[2,3,4,5] The mean age of affected patients was 53. GCA has a potential for local recurrence, especially after incomplete resection but has no metastatic spread.[1,2,3,4,5,6,,7,8]

The typical histological picture of GCA reveals a richly vascularized, patternless spindle-cell proliferation with pseudovascular spaces. Multinucleated giant cells of the floret type occur throughout the lesion and line the pseudovascular spaces.[1,2] In fact, Dei Tos et al. described the histologic features of GCA as intermediate between giant cell fibroblastoma (GCF) and solitary fibrous tumor (SFT).

GCF is an uncommon, benign tumor of soft tissue most often presents in early childhood. GCF and GCA are closely related tumors, both show IHC staining for vimentin, and CD34.[8] SFT is a rare soft tissue neoplasm, which was originally described in the pleura.[9] Since their initial description as a pleural tumour, SFTs have been reported at a wide range of anatomic sites including oral cavity.[10] The tumour cells are positive to vimentin and CD34 making it difficult to be differentiated from GCA.

In, addition, many other soft tissue tumors share the same histological and IHC features of GCA. These lesions include dermatofibrosarcoma protuberans (DFSP), pleomorphic hyalinizing angiectatic tumour (PHAT) of soft parts, multinucleate cell angiohistiocytoma (MCAH), benign fibrous histiocytoma (BFH), and angiomyolipoma (AML).[4]

CONCLUSION

We report the fifth case of GCA arising in the oral cavity. At this time, local excision with long-term follow-up seems to be the most appropriate management option with possibility of recurrence especially if left incompletely resected. It is essential to be aware of this tumour in order to avoid misdiagnosis with others fibrous tumours.

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