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RESEARCH ARTICLE

SOLITARY FIBROUS TUMOUR OF BUCCAL MUCOSA: CLINICO-RADIOGRAPHIC, PATHOLOGIC AND IMMUNOHISTOCHEMICAL FEATURES.

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Abstract

Solitary fibrous tumours are spindle cell neoplasms that usually occur in the pleura and peritoneum and rarely involve the oral cavity. We report a clinical case of a 43-years old male patient with a solitary fibrous tumour in the right buccal mucosa. These tumours exhibit widely different behaviour and the confirmation of diagnosis depends on immunohistochemical results. The lesion was excised and did not recur after a follow-up period of fourteen months.

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Introduction:-

Solitary fibrous tumour (SFT) is a rare spindle cell neoplasm of mesenchymal origin¹. It was previously termed as hemangiopericytoma. SFTs are usually found in the pleura and peritoneum, however, they may appear in any part of the body including thyroid, spinal cord, nasopharynx, mediastinum, sinonasal tract, salivary gland and orbit²⁻³.

Case Report

A 43-year old man visited the Department of Oral and Maxillofacial Surgery of our institution with the chief complaint of a swelling in the right cheek region since 2 years. The swelling was initially small but gradually increased in size over time. There was no associated pain or any other symptoms. The patient had a discrete asymmetry of the face and the extra-oral examination revealed the presence of a 5cm × 4cm sessile, firm and slightly mobile mass. Intra-orally there was no obvious swelling, however if the lesion was pushed from outside it could be palpated in the right buccal mucosa within the oral cavity. Ultrasonography was done which revealed a well-defined hyperechogenic mass in the right buccal mucosa (Figure 1). The mass measured about 45mm×28mm×17mm in greatest dimension. Under local anesthesia, the lesion was surgically exposed and excised (Figures 2a & 2b). The specimen was sent for histopathological examination (Figure 3). Sections stained with haematoxylin and eosin revealed the presence of connective tissue stroma infiltrated with spindle cells and epithelioid cells arranged in storiform pattern focally. There was also presence of multiple blood vessels, some of which showed staghorn pattern and marked perivascular hyalinization. The tumour cells showed nuclear pleomorphism with minimal collagen in connective tissue stroma. Immunohistochemical staining was done for CD

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34, BCL-2, SMA, EMA/CK and Calponin of which only CD34 and BCL-2 was positive. Periodic follow up was done and there had been no recurrence after fourteen months.

Discussion:-

Solitary fibrous tumour is a rare benign soft tissue neoplasm which was usually found in the pleura. This led to the belief that they probably originated from the submesothelial primitive mesenchymal cells and that it was essentially a pleural mesothelioma. However, they have also been seen to occur in different parts of the body including thyroid, peritonium, nasopharynx, salivary tissue, scalp, cheek and even oral cavity. Since then, it is considered that SFT is an entirely different entity which is clearly distinct from that of pleural mesothelioma. It is now believed that SFT arises from the ubiquitous interstitial stem cells present in various soft tissues of the body⁴⁻⁶.

Intra-oral SFTs are quite rare and they comprise only about 3% of all the reported cases of such tumours in the body. The most common intra-oral sites are the tongue and the buccal mucosa⁷. Buccal mucosa (right) was also the site of the tumour in our patient.

These tumours have no particular sex predilection affecting both men and women equally and also they seem to arise in middle aged and elderly people⁷. In our case SFT was found in a middle-aged male person.

These tumours may exhibit a wide range of symptoms which vary from individual to individual and also depends on the depth and site of the tumour. Most often they present as asymptomatic, slow-growing benign masses with more or less normal overlying skin and mucosa. However, some lesions may show aggressive behaviour and may also undergo malignant transformation. Malignant SFTs can metastasise to the lung, liver and bone^{3,5}.

SFT usually appears as a soft tissue mass which may be identified with an angiography due to the hypervascular nature of the tumour⁸. Ultrasonography may be done which may depict the size, site and nature of the lesion as was done in our case. Computed tomography (CT), magnetic resonance imaging (MRI), plain X-ray films may be also done for the tumour, however they are not specific⁸.

Histopathological diagnosis of such tumours is quite difficult due to the varied morphological characteristics exhibited by them. Differential diagnoses include neurofibromas, schwannomas, leiomyomas, fibrous histiocytomas, spindle cell lipomas, synovial sarcomas, fibromatoses, and haemangiopericytomas⁹.

The diagnosis of SFT is almost always confirmed by immunohistochemical analysis which shows positivity for CD34, BCL2 and CD99. In our case strong positivity was shown for CD34 and BCL2.

Treatment of choice is usually surgical excision of the lesion with minimal chance of recurrence. In case of malignant SFTs surgical excision should be carried out with radiotherapy or chemotherapy¹⁰.

Long term follow-up is required both clinically as well as radiologically to detect recurrence or any malignant transformation.

Conclusion:-

SFTs are extremely rare in the cheek. Diagnosis is confirmed by immunohistochemical analysis. Complete surgical excision is the treatment of choice. Periodic follow-up of the patient is necessary to rule out any recurrence or malignant transformation.

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Conflicts of interest

There are no conflicts of interest.

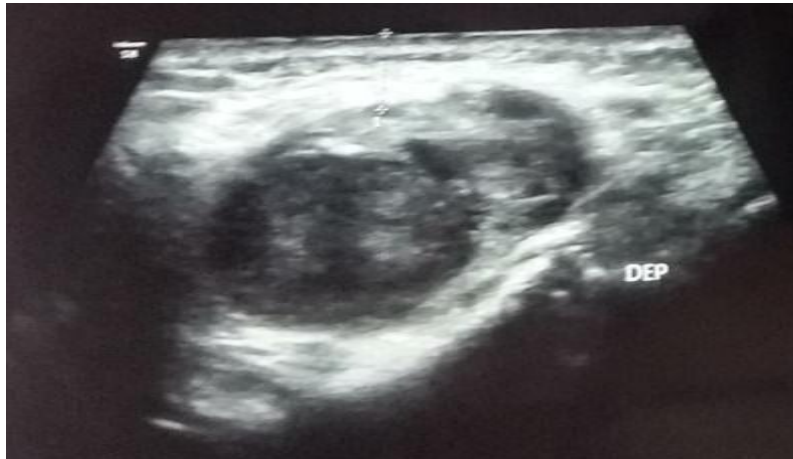


Figure 1: -Ultrasonography of the right buccal mucosa depicting the solitary fibrous tumour.

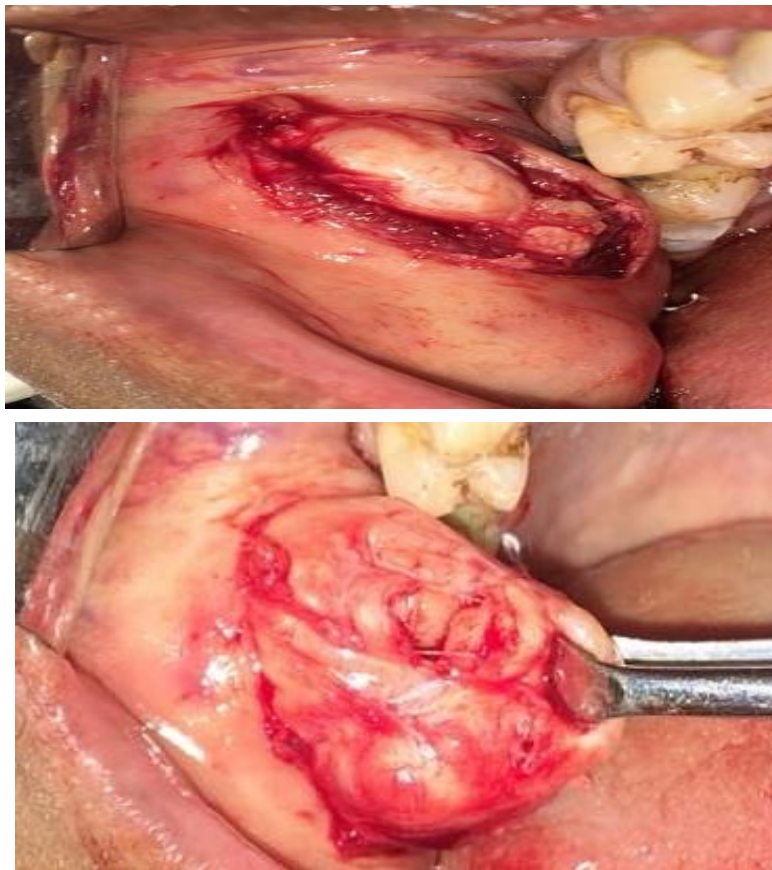


Figure 2: -Intraoperative images

- a. Showing exposure of the lesion from right buccal mucosa
- b. Showing surgical excision of the tumour



Figure 3: -Tumour specimen excised from the right buccal mucosa

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