

## Malignant Fibrous Histiocytoma in Deep Lobe of Parotid Gland – A Rare Case Report



### Medical Science

**KEYWORDS :** Fibrous histiocytoma, Parapharyngeal space tumor, deep lobe parotid tumor

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### ABSTRACT

*Fibrous histiocytoma is a tumor of biphasic cell population of fibroblasts and histiocytes. It usually occurs in the sun exposed skin and orbital tissue. But it has also been found in the upper aerodigestive tract, salivary gland, deep layers of scalp and face. Fibrous histiocytoma of parotid gland is extremely rare. It must be distinguished from other spindle cell tumors of parotid gland, particularly those of epithelial and myoepithelial origins. In immunohistochemical studies, antibody markers against vimentin and smooth muscle-specific actin lead to the diagnosis of Fibrous histiocytoma. The malignant Fibrous histiocytoma can be differentiated by its histopathology. It consists of pleomorphism of cells, abundant mitotic figure, atypical mitosis and other tissue invasion. The clinical features such as rapid growth and distant organ metastasis allow a diagnosis of malignant variants. Treatment of benign Fibrous histiocytoma can be made by a wide local excision without sacrificing near organs. In the present case tumor involves the deep lobe of parotid gland with some interesting manifestations which decreased after the removal of tumor and total parotidectomy. As it is diagnosed to be malignant we planned radiotherapy to prevent the recurrence.*

### Introduction –

Malignant Fibrous histiocytoma/fibrohistiocytoma (MFH) is an infrequent neoplasm that may arise in any region of the body, though it is generally found in the limbs (Particularly the legs) and abdomen (retroperitoneum) (1). The term “malignant fibrohistiocytoma” was introduced in 1963, reference to tumor composed of histiocytes and fibroblasts. At present these lesions are considered to be the variant of high grade sarcoma (2). MFH tends to develop in the skin in the form of small slow growing nodules though its behavior is more aggressive when the lesions are located in deep lying tissue (3). The region of head and neck is affected in 3% of cases and among this nasosinusal tract being the most common location (1). Involvement of the parotid region has been reported in about 17 cases till date (2). While the histological origin is unclear, it has been postulated that the tumor derives from histiocytes that morphologically and functionally differentiate to form fibroblast (5). The present study describes a case of MFH located in the region of the parotid gland involving deep lobe with atypical presentations.

### Case Report –

An 18 year old male patient was referred to ENT out patient department of ASRAM Medical College, Eluru, for a swelling in the left parotid region since last 3 months. Patient was having difficulty in opening of the mouth and difficulty in swallowing since 1 month. He was also having reduction of hearing in the same side of the ear since one month. Physical examination revealed a mass 5cmx5cm in size, located in the left parotid region which was firm in consistency and nontender on palpation. On examination of oral cavity left tonsil was found to be pushed up to the mid line. On digital examination of the mass in the oropharynx, it was firm in consistency and non tender. The bimanual examination revealed outer and inner mass were in continuity. Tongue was deviated to same side on protrusion. There was dislocation of left temporomandibular joint.

CT scan of neck revealed evidence of large well defined lobulated mild homogeneously enhancing soft tissue lesion noted arising from the deep lobe of parotid gland and occupying prestyloid parapharyngeal space and infratemporal fossae. There was no evidence of calcification or necrosis within the lesion. The lesion was displacing external carotid artery and its branches posterolaterally and sub mandibular gland anteromedially. There was obliteration of the adipose cleavage planes and deformation of the pharyngeal lateral wall with reduction of the air column.

Fine needle aspiration cytology taken from superficial lobe showed spindle cell variant of pleomorphic adenoma.

Pure tone audiometry showed conductive type of hearing loss in

the left ear and Impedance audiometry showed B' type of curve suggesting fluid in the left middle ear.

Total parotidectomy was done under general anaesthesia. Intra operatively tumor was found to be involving the deep lobe of parotid gland more than superficial lobe. Facial nerve and its branches were dissected out and both the lobes of parotid gland were removed. Specimen was sent for histopathological study. It showed fibrous histiocytoma in both the lobes intermediately malignant type.

Post operatively left tonsil came to normal position and Dysphagia improved. Mandible could not be maintained in normal position due to recurrent dislocation of temporomandibular joint. There was temporary facial palsy for 7 days which improved by treatment with short course of steroid and neurovitamins.

Radiotherapy was planned to destroy any remnant tumor cells to reduce recurrence. Patient sent for dental consultation for left temporomandibular joint dislocation.

### Discussions --

Tumors located in the parapharyngeal space are relatively rare and experience in diagnosis and treatment is very limited. Management of these tumors is more challenging due to the anatomical location of the parapharyngeal space : this space is situated behind the infra-temporal fossa, lateral to the nasopharynx and before the cervical column. This space is shaped like an inverted pyramid, the base of which is formed by the base of the cranium (small portion of petrosal bone) and the apex defines the joint between the posterior belly of the digastric muscle and the greater cornu of hyoid bone. Here the styloid process and the associated musculature are also found as well as the internal carotid artery, the sympathetic chain and the IX and XII cranial nerve pairs. Post styloid masses are usually benign and correspond to neurogenic tumors, paragangliomas, vascular tumors or aneurysms. Those located in front of the carotid artery are called prestyloid and their origin is much more varied.

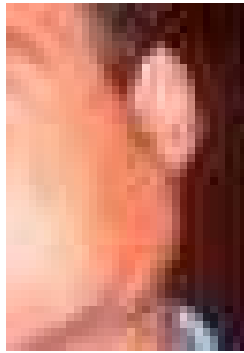
Pleomorphic adenoma is the most common salivary gland neoplasm, accounting for 63% of all parotid gland tumors and also it is the most common tumor involving the deep lobe (4). Malignant fibrous histiocytoma is very rare in parotid and involvement of deep lobe is also very rare and it should be treated with both radiotherapy and chemotherapy postoperatively (2). sometimes it may be needed to put a flap to prevent the deformity of the face. Here the diagnosis is always confusing. Both FNAC and CT scan improve the accuracy. But diagnosis of this histological variety depends on histological study and immunohistochemical analysis.

**Conclusion --**

Malignant Fibrous histiocytoma/fibrohistiocytoma (MFH) is an infrequent neoplasm that may arise in any region of the body. Fibrous histiocytoma of parotid gland is extremely rare. Involvement of this region has been reported in about 17 cases till date. While the histological origin is unclear, it has been postulated that the tumor derives from histiocytes that morphologically and functionally differentiate to form fibroblast. We are presenting this case because of its rare occurrence.



(Left tonsil pushed medially)



(Left enlarged parotid gland)

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