



## A CASE REPORT- BENIGN FIBROUS HISTIOCYTOMA IN NASAL VESTIBULE

## Pathology

<b>Sarita Nibhoria</b>	Professor, Department of Pathology, GGS Medical College Faridkot
<b>Rama Kumari</b>	Assistant Professor, Department of Pathology, GGS Medical College Faridkot
<b>Manmeet Kaur*</b>	Associate Professor, Department of Pathology, GGS Medical College Faridkot *Corresponding Author
<b>Arshpreet Kaur</b>	Senior Resident, Department of Pathology, GGS Medical College Faridkot
<b>Parul</b>	Junior Resident, Department of Pathology, GGS Medical College Faridkot

## ABSTRACT

Benign fibrous histiocytoma (also known as dermatofibroma, subepidermal nodular fibrosis, histiocytoma, and sclerosing hemangioma) refers to a group of neoplastic lesions that show both fibroblastic and histiocytic differentiation. It is reported to present at any age with predominance in male adults (2.5:1). We report a case of 18 year old male presented with complaint of a mass in nasal vestibule. Local excision was done and sent for histopathological examination. No definite cases of BFH involving the nasal vestibule have been identified, so far. One case of a not-better-specified histiocytoma of the nasal vestibule has been reported in 1964.<sup>[4]</sup>

## KEYWORDS

Benign fibrous histiocytoma, nasal vestibule.

## INTRODUCTION

Benign fibrous histiocytoma (also known as dermatofibroma, subepidermal nodular fibrosis, histiocytoma, and sclerosing hemangioma) refers to a group of neoplastic lesions that show both fibroblastic and histiocytic differentiation. It is reported to present at any age with predominance in male adults (2.5:1). It has been reported in males older than 25 years, with a mean age of 40 years.

It is considered a benign Mesenchymal lesion arising in the cutaneous and non-cutaneous soft tissues. While cutaneous BFH usually originates in sun exposed skin, non-cutaneous soft tissue BFH usually presents itself in subcutaneous tissues of the extremities and more rarely in visceral spaces like retroperitoneum and pelvis; localizations in tendons are rare and visceral presentations anecdotal.[1] Tumors of the nasal vestibule are generally rare and reports of nonepithelial variants absolutely exceptional [2]; no definite cases of fibrohistiocytic tumors in this site are present in literature so far.

Clinically, they may be single or multiple, and have a flat, polypoid or depressed shape. Most of them are less than 1 cm in diameter, but some can reach huge proportions. On cut section, they are usually solid and well circumscribed, white to yellow to dark brown, depending on the relative amounts of fibrous tissue, fat, and hemosiderin. Microscopically, there is a cellular fibroblastic-like proliferation with varying amounts of collagen deposition.

## Case Report

An eighteen year old male presented to the hospital with complaint of painless mass in the left nasal vestibule for eight months. He had complaint of unilateral nasal obstruction and difficulty in breathing. Patient was operated for the same. Excision was done and material was sent for histopathological examination. Grossly, it was well circumscribed and non encapsulated measuring 2x1.5x1cm. On cut section, it was grey white. H&E stained sections revealed a non-infiltrating fibro-histiocytic lesion composed of interlacing fascicles of spindle cells having plump and vesicular nucleus with tapered and blunt ends.(Figure 1,2) Immunohistochemical stain for Vimentin was done and found to be positive. (Figure 3)

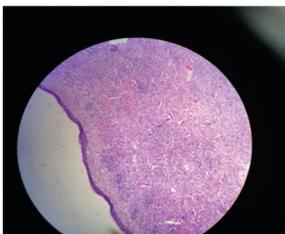


Figure 1: H&E stained section showing fibro-histiocytic lesion composed of interlacing fascicles of spindle cells at 100X.

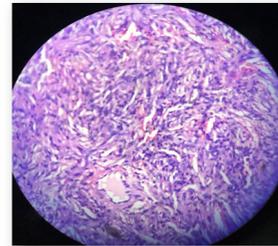


Figure 2: H&E stained section showing fibro-histiocytic lesion composed of interlacing fascicles of spindle cells at 400X.

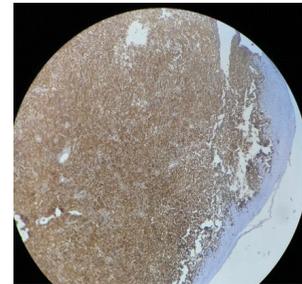


Figure 12: Immunohistochemical stain for Vimentin was found to be strongly positive.

## DISCUSSION

BFH most frequently occurs in the long bones (40% of cases) mainly involving the femur and tibia and pelvic bones (25%), in particular the ilium. However, this tumor may involve virtually any bone including the facial skeleton and skull. In the long bones, benign fibrous histiocytoma is chiefly located in the epiphysis or diaphysis. [1] No definite cases involving the nasal vestibule have been identified, so far. One case of a not-better-specified histiocytoma of the nasal vestibule has been reported in 1964.[2]

In the area of nose and paranasal sinuses patients with soft tissue BFH usually present no history of pain and the predominant clinical feature of discomfort and/or nasal obstruction from a rapidly enlarging mass. Swelling in the affected area, nasal discharge, epistaxis and loosening of teeth, facial asymmetry and proptosis may be present in some cases.[3]

No specific risk factors for BFH of the nasal fossa have been identified in the literature, but given the probable reactive nature of soft tissue BFH in general, persistent nasal picking and consequent irritation of

the vestibular area may be considered as a possible contributing factor.[4]

Little is known on the possible genetic background leading to the formation of BFH most probably to due to the rarity of the tumor and the minor importance it is granted when compared to malignant variants. There has been a single report of a t(16:17)(p13.3;q21.3) translocation in a deep BFH of the thigh.[5]

In BFH, immunohistochemistry is positive for CD68, 1-antitrypsin, 1-antichymotrypsin, and vimentin, whereas it is negative for cytokeratin, epithelial membrane antigen, smooth muscle actin, S-100 protein, and CD34.[6] Solitary fibrous tumor differs from BFH as it is highly positive for CD34. Differentiation between BFH and neurofibroma (NF) can be based on NF positivity for S-100, and the presence of more frequent mitoses and different fascicle configuration in neurofibromas. The negativity for SMA and S-100 helps differentiation from leiomyosarcoma and neurogenic tumors.[7]

The malignant variant of fibrohistiocytic tumors is considered as a highly aggressive sarcoma and is usually distinguishable from benign variants not only by its aggressive clinical course but also by the high mitotic rate cellular pleomorphism and atypical cells and by the tendency versus surrounding tissue invasion.[8][9] In some cases, however differential diagnosis might be challenging.[10]

## CONCLUSION

When evaluating lesions of the head and neck region, BFH should be taken into consideration and vestibular lesions shouldn't be considered of sole epithelial cell. Local excision followed by histopathological examination and immunohistochemistry is helpful for reaching upto the diagnosis.

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