CASE REPORT

OPEN ACCESS

Massive recurrent fibrous histiocytoma of the frontonasal region: A case report

Fomete B, Agbara R, Adeola DS, Idehen OK

ABSTRACT

Introduction: Fibrous histiocytoma is the name for a group of lesions characterized by biphasic cell populations of fibroblast and histiocytes. Both benign and malignant forms have been described. The benign form often shows relapse following treatment and shows poor response to chemotherapy and radiotherapy. Therefore, radical excision or resection remains the therapeutic goal. **Case report:** Herein, we present a case of recurrent benign fibrous histiocytoma of the head and neck in a 25-year-old Nigerian male that was excised and skin grafted. **Conclusion:** Fibrous histiocytoma is less common in the head and neck region.

Keywords: Fibrous histiocytoma, Recurrent, Frontonasal

Fomete B, Agbara R, Adeola DS, Idehen OK. Massive recurrent fibrous histiocytoma of the frontonasal region: A case report. International Journal of Case Reports and Images 2013;4(11):589–592.

doi:10.5348/ijcri-2013-11-387-CR-1

INTRODUCTION

Fibrous histiocytoma is a rare group of tumors with biphasic cell populations of fibroblast and histiocytes and which may exhibit benign or malignant features. Cutaneous and non-cutaneous forms have been described. Cutaneous fibrous histiocytoma refers to all superficial tumor of skin regardless of appearance while similar lesions involving the subcutaneous or deeper tissues are simply referred to as fibrous histiocytoma [1, 2].

In contrast to the malignant form, benign fibrous histiocytoma (BFH) of non-cutaneous tissues has received little attention in literature [1]. Less than 10 cases of non-cutaneous fibrous histiocytoma of the head and neck region have been reported in literature [1–4].

Specific sites of involvement, on the head and neck region, described in literature, include buccal mucosa, submandibular triangle, tongue, larynx, nasal cavity, mandible and supraclavicular fossa [4]. We found no occurrence at the frontal region.

Herein, we present a case of a 25-year-old Nigerian male with recurrent BFH, highlighting the challenges associated with oral surgical practice in a resource-poor environment.

CASE REPORT

A 25-year-old male carpenter was referred to our clinic from the surgical outpatient department on account of recurrent frontonasal mass of two years duration. Swelling was first noticed 10 years ago following trauma to the frontal region and gradually increased in size. The excision of mass was done twice in a peripheral hospital and the last excision was two years prior to the presentation. The forehead was the initial site of involvement but swelling gradually expanded with each recurrence to involve the nasal region. Except for headache, all other medical history was not significant.

Physical examination revealed a frontonasal mass involving both frontal regions but more to the right side, measures about 10 cm in its widest diameter, with some scars and some superficial vessels (Figure 1). Surface was smooth but lobulated, firm in consistency and not tender.

Fomete B¹, Agbara R¹, Adeola DS¹, Idehen OK¹
Affiliations: ¹Maxillofacial Unit, Ahmadu Bello University Teaching Hospital, Zaria, Nigeria.
Corresponding Author: Dr. Benjamin Fomete, P.O. Box 3772, Kaduna, Nigeria; Ph: +2348034515494; E-mail: benfometey@hotmail.com

Received: 21 December 2012
Accepted: 19 June 2013
Published: 01 November 2013

Swelling was attached to the underlying structures with involvement of the overlying skin. But the nasal cavity was free.

Fine needle aspiration cytology (FNAC) revealed a benign lesion, voluntary retroviral screening was negative, full blood count and electrolyte, urea and creatinine were within normal range.

Axial computed tomography (CT) scan revealed an extracranial mass of soft tissue origin with slight erosion of the frontal bone. The mass had a signal characteristics mimicking brain tissue.

Patient had excision of mass under general anaesthesia with delayed split thickness skin grafting two months post excision to allow for adequate granulation tissue formation and possible recurrence (Figure 2). He is currently on follow-up and doing well so far.

Postoperative histology report grossly, a skin covered sessile polyp measuring 13.5x9x9 cm and weighs 434 g. Cut surfaces showed grey solid areas.

Microscopy revealed a circumscribed dermal lesion lined by a focally atrophied, pigmented, keratinized epidermis. The lesion is composed of a mixture of plump spindle cells and histiocytes-like cells growing in a diffuse sheet. The stroma is abundant fibromyxoid to collagenized with foci of lymphocytic infiltrates and congested vascular channels. The deep margins appeared to be involved by the lesion (Figure 3).

Figure 2: Skin grafted wound.

Figure 1: Frontal view of a 25-year-old male with recurrent benign fibrous histiocytoma.

Figure 3: A mixture of plump spindle cells and histiocytes-like cells growing in a diffuse sheet (H&E stain, x100).

DISCUSSION

Benign fibrous histiocytoma was not recognized as a distinct clinical entity until the 1960s as a result of confusion regarding the natural history of fibrohistiocytic lesions. This confusion was settled following the development of immunohistochemical techniques and electronic microscopy [1, 5].

Benign fibrous histiocytoma occurs more in the upper and lower extremities and in the retroperitoneal region.

Involvement of the head and neck region have been described and sites involved include buccal mucosa, submandibular triangle, tongue, larynx, nasal cavity, mandible and supraclavicular fossa [1]. This case is unique due to its site of presentation, the frontal region.

The occurrence of fibrous histiocytoma has been associated with trauma, sun exposure and chronic

infection. These have lead to the postulation that it represents a reactive proliferative lesion [4]. The patient in our case had a history of trauma to the frontal region following a fight, and noticed occurrence of initial mass one month later. The average duration of tumor occurrence in literatures ranges from 3–12 months.

The BFH is seen commonly in young or middle age adults with a male predominance. The reported male to female ratio ranges from 1.9:1 to 2.5:1 [6, 7]. The patient in our case was a 25-year-old male. Most patients presented to the hospital as a result of symptoms from interference with normal physiology of the involved area such as dyspnea, dysphagia, visual disturbance and headaches or present for esthetic reasons [1]. The patient in this case, reported a history of headache and was worried about his esthetics.

The diagnosis of fibrous histiocytoma is made primarily from histologic examination of tissue samples in which conventional microscopy shows a mixed population of spindle shaped fibroblast and rounded histiocytes in varying proportions [8, 9]. The lesion in our case was composed of a mixture of plump spindle cells and histiocytes-like cells growing in a diffuse sheet. The stroma was abundant fibromyxoid to collagenized with foci of lymphocytic infiltrates and congested vascular channels. The maximum diameter has been reported to range from 2–12 cm [4]. In our case it was about 13.5 cm in its widest diameter.

Electron microscopic and immunohistochemical studies though not specific, helps in differentiating BFH from aggressive fibrous histiocytic lesions such as malignant fibrous histiocytoma (MFH) and dermatofibrosarcoma protuberans [10]. With immunohistochemical studies, BFH shows a significant population of XlIIa-positive cells with scanty CD4 positive cells. The reverse is the case with dermatofibrosarcoma protuberans [10, 11]. Other differentials to be considered are neurofibroma and leiomyosarcoma.

Treatment in most cases is essentially local excision since it is neither radiosensitive or chemosensitive. There is no report of metastases, thus the prognosis is generally good. Recurrence has been reported and incomplete excision is believed to be a reason [4, 12]. About 12 out of 46 cases of benign fibrous histiocytoma followed-up, with a mean follow-up of three years, recurred [6]. The patient in our case report had two recurrences, the second recurrence occurring within one year of excision both in a peripheral hospital. In view of recurrent potential, patient should be promptly refer to the specialist and prolong follow-up, if not for life.

CONCLUSION

Though less common in the head and neck region occurrence of benign fibrous histiocytoma may be associated with functional or aesthetic problems. Understanding its clinical behavior and histological

features are vital in differentiating it from other lesions and in its management.

Author Contributions

Fomete B – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Agbara R – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Adeola DS – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Idehen OK – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

Copyright

© Fomete B et al. 2013; This article is distributed under the terms of Creative Commons attribution 3.0 License which permits unrestricted use, distribution and reproduction in any means provided the original authors and original publisher are properly credited. (Please see www.ijcasereportsandimages.com/copyright-policy.php for more information.)

CONSENT

A written consent was obtained from the patient for the use of images and publication.

REFERENCES

1. Bielałowicz S, Dauer MS, Chang B, Zimmerman MC. Noncutaneous benign fibrous histiocytoma of the head and neck. *Otolaryngol Head Neck Surg* 1995 Jul;113(1):140–6.
2. Batsakis JG. Fibrous lesions of the head and neck: Benign, malignant and intermediate. In Batsakis JG, editor. *Tumours of the head and neck*. 2nd edn. Baltimore, MD: Williams and Wilkins 1979:252–79.
3. Fletcher CD. Benign fibrous histiocytoma of the subcutaneous and deep soft tissue: A clinicopathologic analysis of 21 cases. *Am J Surg Pathol* 1990 Sep;14(9):801–9.
4. Skoulakis CE, Papadakis CE, Datseris GE, Drivas EI, Kyrmizakis DE, Bizakis JG. Subcutaneous benign fibrous histiocytoma of the cheek. Case report and

- review of the literature. *Acta Otorhinolaryngol Ital* 2007 Apr;27(2):90–3.
5. Kamino H, Salcedo E. Histopathologic and immunohistochemical diagnosis of benign and malignant fibrous and fibrohistiocytic tumours of the skin. *Dermatol Clin* 1999 Jul;17(3):487–505.
 6. Calonje E, Mentzel T, Fletcher CD. Cellular benign fibrous histiocytoma. Clinicopathologic analysis of 74 cases of a distinctive variant of cutaneous fibrous histiocytoma with frequent recurrence. *Am J Surg Pathol* 1994 Jul;18(7):668–76.
 7. Hong KH, Kim YK, Park JK. Benign fibrous histiocytoma of the floor of the mouth. *Otolaryngol Head Neck Surg* 1999 Sep;121(3):330–3.
 8. Rice DH, Batsakis JG, Headington JT, Boles R. Fibrous histiocytoma of the nose and paranasal sinuses. *Arch Otolaryngol* 1974 Nov;100(5):398–401.
 9. Perzin KH, Fu YS. Non-epithelial tumors of the nasal cavity, paranasal sinuses and nasopharynx: A clinico-pathologic study XI. fibrous histiocytomas. *Cancer* 1980 May 15;45(10):2616–6.
 10. Mentzel T, Kutzner H, Rütten A, Hügel H. Benign fibrous histiocytoma (dermatofibroma) of the face: Clinicopathologic and immunohistochemical study of 34 cases associated with an aggressive clinical course. *Am J Dermatopathol* 2001 Oct;23(5):419–26.
 11. Chen TC, Kuo T, Chan HL. Dermatofibroma is a clonal proliferative disease. *J Cutan Pathol* 2000 Jan;27(1):36–9.
 12. Giovani P, Patrikidou A, Ntomouchtsis A, Meditskou S, Thuau H, Vahtsevanos K. Benign Fibrous Histiocytoma of the Buccal Mucosa: Case Report and Literature Review. *Case Rep Med* 2010;2010:306148.

Access full text article on
other devices

Access PDF of article on
other devices