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DERMATOFIBROMA OF THE FOREHEAD - A RARE CASE REPORT

Plastic Surgery

Centina Rose John* — Fellow In Craniomaxillofacial Trauma Surgery, Dept. Of Plastic & Reconstructive Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105. *Corresponding Author

Surya Rao Rao Venkata Mahipathy — Professor & Head, Dept. Of Plastic & Reconstructive Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105.

Praveen Ganesh Natarajan — Assistant Professor & Craniofacial Surgeon, Dept. Of Plastic & Reconstructive Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105.

Alagar Raja Durairaj — Professor, Dept. Of Plastic & Reconstructive Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105.

Narayanamurthy Sundaramurthy — Associate Professor, Dept. Of Plastic & Reconstructive Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105.

Muthuvel Esakki — Professor, Dept. Of Pathology, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105.

Anand Prasath Jayachandiran — Assistant Professor, Dept. Of Plastic & Reconstructive Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105.

James Solomon Jesudasan — Assistant Professor & Craniofacial Surgeon, Dept. Of Plastic & Reconstructive Surgery, Saveetha Medical College & Hospital, Thandalam, Kanchipuram Dist. 602105.

ABSTRACT

Dermatofibroma (DF) with its histopathological variants often presented in extremities and rarely observed in face. The authors reporting case of dermatofibroma in 49 year old lady presented with asymptomatic nodule on the forehead without any inciting event. Surgical excision was carried and on histopathologic evaluation, classical type of dermatofibroma pertaining to dermis was confirmed. The differentiation of various histopathological variants of DF is necessary for the prognosis of the lesion as well as understanding the probability of recurrences and metastasis.

KEYWORDS

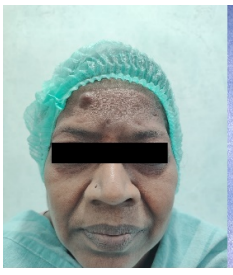
Dermatofibroma, Benign Fibrous Histiocytoma, Rare

INTRODUCTION

Dermatofibroma (DF) is a slow growing benign mesenchymal lesion centred within dermis as firm subcutaneous nodule or involving deep soft tissues. Even though reactive process or neoplastic proliferation endorse the development of tumour, a spontaneous development without a regression were also reported[1]. Clinically presented as solitary painless lesion confined commonly to extremities, with female predominance, can rarely involves the face. As it is rare on the face, it is often misdiagnosed, which can be more aggressive and difficult to treat at a later stage.[2] A diagnostic differentiation from Dermatofib rosarcoma Protuberans (DFSP) is mandatory due to wide variety of histopathological variants.[3] The aim of our report is to emphasis rarity of the occurrence of lesion in forehead.

CASE REPORT

A 49 year old lady had reported to the Department of Plastic and Reconstructive Surgery of Saveetha Medical College Hospital, Chennai, with a dome shaped asymptomatic nodule on the forehead region present for the past two years. It was spontaneous in onset with no inciting event or trauma associated, and had increased in size gradually for the last one year. Physical examination revealed a soft solitary lesion of approximately 1x1 cm which was non-tender, with smooth surface and without overlying skin change. Lateral inward pressure at its boundaries with the fingers produced a central dimpling over the lesion (Dimple sign positive). With an elliptical incision encircling the lesion, excision was done in toto under local anesthesia with adherent skin at summit and skin closure performed (Figure 1).



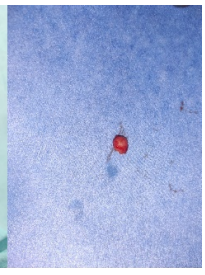
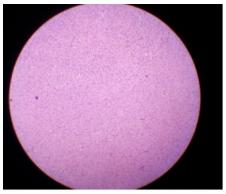


Figure 1 A: Clinical appe arance of lesion on forehead, B : Lesion completely excised under local anesthesia.



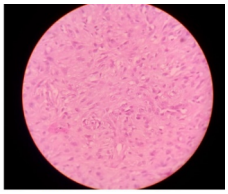


Figure 2A : Spindle cells in vague storiform pattern (H& E, magnificationx10) 2B: Benign spindle cells without pleomorphism (H& E, magnification x40)

On histopathological evaluation, a neoplasm composed of elongated spindle cells arranged in storiform pattern in fibrous stroma with focal lymphocytic infiltrate, with no evidence of mitotic activity or necrosis was observed (Figure 2). Patient complaint of no local recurrence

afterwards and on regular follow up for 6 months.

DISCUSSION

Dermatofibroma (DF) also known as benign fibrous histiocytoma (BFH) are clinically found to have a previous history of a minor local trauma or an insect bite on the location of lesion. A controversial etiology of a reactive or neoplastic model exist in the development of DF. In our report, the history is possibly in favour of clonal or neoplastic model as the patient developed the lesion spontaneously owing to the negligence of an initial traumatic history.

DF of the face is one of the rarest observed condition which was reported in the study by Mentzel T et al in 2001.[4] The authors have collected data of all cases of fibrous histiocytomas during the period between 1989-2001 (approximately 33000 cases) out of which only 34 cases reported to have the lesion on the face. Out of these, only 9 patients had the lesion on forehead. Aggressiveness of neoplasm as well as recurrence is a point to evaluate considering this study as the author has reported 3 cases out of 34 which was confined to dermis whereas diffuse infiltrate with various growth patterns (storiform/ fascicular/ nodular) with mitosis and atypia were observed in the rest. The need for complete wide excision with tumor free margins are advocated due to the tendency of the lesion on the face to show diffuse infiltration of deeper structures with involvement of striated muscles as well as increased rate of local recurrence in contrast to the cases occurring on lower extremities as the fact that facial striated muscle is more superficially located than skeletal muscles in other parts of the body, and the lack of perimuscular fascia.[4]

On contrary, JR Estela et al[5] reported 20 cases of DF of face with 7 on forehead over a period of 22 years which were confined to dermis with storiform pattern. No local recurrence were reported, and concluded that the lesion behave similar to other DF on the extremities. We identified the lesion on forehead to be similar, limited to the dermis with no local recurrence.

Histologically, DF is a localized proliferation of spindle shaped fibrous cells and histiocytoid cells within the dermis.[1] A multi-centric whorling appearance of the elongated nuclei (storiform pattern) with multinucleated giant cells, capillaries and lymphocytes describes the classical DF. Presence of trapped collagen bundles between the spindled fibrous cells reveal the proliferation into subcutaneous tissue.[1]

Clinical symptoms, histological and radiological characteristics mimic with many other begin and malignant lesions which makes the clinician vigilant in early detection and diagnosis of the same.[6] DF can mimic lesions such as non-ossifying fibromas, giant cell tumours, fibrous dysplasia, aneurysmal bone cysts, osteoblastomas, eosino philic granulomas, chondrosarcomas, rhabdomyosarcomas, desmoid tumours, dermatofibromatous protuberans and malignant fibroma histiocytomas.[7] Histologically DF is a dermal neoplasm to be differen tiated from Dermatofibrosarcoma Protuberance. DFSP is locally aggressive neoplasm with honeycomb infiltration into subcutaneous fat tissue with higher mitotic rate, with cells stain positive for CD34 and negative for factor XIIIa in immunochemistry in contradiction to DF. Fibrosarcomatous variant of DFSP has higher risk of local recurrence and distal metastasis (8-29%).[8]

CONCLUSION

DF of face is a rare entity particularly on the forehead region of the face. The differentiation of various histopathological variants of DF is necessary for the prognosis of the lesion as well as understanding the probability of recurrences and metastasis.

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