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Case Report

“FIBRO-LIPOMA” OF FOREHEAD- A CASE REPORT OF A RARE VARIANT

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ABSTRACT

Lipomas are the most common benign connective tissue tumors of mesenchymal origin comprising of mature adipocytes. They are termed as the “universal tumor” or the “ubiquitous tumor” because of its presence in any location in the body arising from the subcutaneous layer. Fibro-lipoma is a distinct histologic variant of lipoma that displays not only proliferation of fat cells, but also proliferation of the adjacent fibrous tissue. We present here a case of fibro-lipoma found on the forehead. The diagnosis and differentiation of fibro-lipoma with clinically similar lesions are very essential for a correct treatment strategy and to limit the esthetic discomfort of the patient associated with this skin tumor.

Keywords: Fibro-lipoma, Chicken-wire appearance, Pericapsular excision

INTRODUCTION

Lipomas are considered as hamartomatous proliferations of mature adipocytes accounting for about 4-5% of total benign tumors of the body. Less than 15% of lipomas occur in the head and neck region, and are believed to arise from superficial sub-cutaneous layer or from the sub-mucosa¹. A lipoma presents itself as a benign, soft, slow growing asymptomatic mass and histologically, composed of mature fat cells grouped in lobules by connective tissue septa.

Traditionally, lipomas have been subdivided into several variants based primarily on the histopathologic differences. However there are associated clinical implications in most of these variants. Fibro-lipomas are an extremely rare subtype of lipomas, comprising 1.6% of facial lipomas^{2,3}. In the literature, there are cases reported as fibro-lipomas in the esophagus, pharynx, colon, trachea, larynx and oral cavity⁴. This article presents a patient with a fibro-lipoma of forehead which is a rare histologic variant.

CASE REPORT

A 62 year old male patient presented with a chief complaint of a long standing mass on the left side of forehead. The growth was first noticed 12 years back, and had slowly enlarged to the present size over the years. There was no history of trauma. Physical examination of the lesion revealed a smooth, soft,

non-tender, non-fluctuant fixed mass on the left side of the forehead (figure-1).



Figure 1: The pre-operative view shows a smooth, soft, non-fluctuant mass on the left side of the forehead

A provisional diagnosis of lipoma was made. The tumor was excised and the tissue was sent for histopathological examination. Macroscopic examination revealed a large soft tissue mass floating in the bottle containing 10% formalin (figure-2) measuring about 2 cm x 2 cm in size, yellowish-white in color, soft in consistency and had a smooth textured surface (figure-3). Microscopic examination revealed the connective tissue stroma consisting of dense collagen fiber streaks arranged in bundles and lobules of mature adipocytes

with no cellular atypia (figure-4). The blood vessels in connective tissue stroma were compressed and engorged with RBC's. Considering the clinical and histopathological features, a diagnosis of fibro-lipoma of forehead was made.



Figure 2: Gross specimen seen floating in the bottle containing 10% formalin

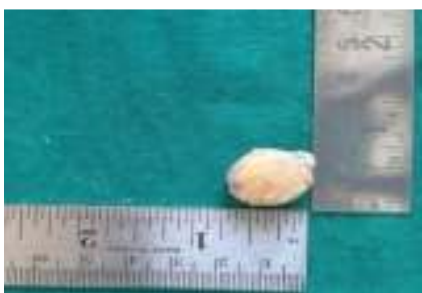


Figure 3: Excised biopsy specimen measuring about 2cm x 2cm



Figure 4: Photomicrograph showing connective tissue stroma consisting of dense collagen fibers arranged in bundles and lobules of mature adipocytes with no cellular atypia (H and E, stain; 40X original magnification)

DISCUSSION

Lipomas are well encapsulated, slow growing, benign mesenchymal skin tumors composed of mature fat cells, of which 13% arise in the head and neck region⁵. The peak incidence is in the fifth and sixth decades of life, and they are rare under the age of 20 years. Clinically it should be differentiated from other soft tissue masses with similar features and the histopathology remains the gold standard in the diagnosis of lipoma. Histopathologically, classic lipomas are composed of mature adipose tissue with lipoblasts showing no cellular atypia. According to World Health Organization (WHO), fibro-lipomas are classified as a distinct variant of lipoma and several other histologic variants described include angio-lipoma, myo-lipoma, spindle cell lipoma, pleomorphic lipoma, osteolipoma/ chondrolipoma, adenolipoma, myelo-lipoma, perineural lipoma and myxoid lipoma⁶.

Lipomas and fibro-lipomas are similar as they both are well circumscribed lesions and have a thin capsule. Microscopically, they differ as fibro-lipoma is composed of lobules of "chicken-wire" appearing benign adipocytes with broad bands of dense collagen. Fibro-lipoma differs from the classic variants because the mature adipose tissue is interspersed by extremely thick bands of collagen fiber bundles (figure-5). Additionally; fibro-lipomas have a higher proliferative activity when compared to the classic variants. Although fibro-lipomas are known to be benign tumors, there are a few cases of conversion to liposarcoma in the literature^{4,7,8}.



Figure 5: Characteristic chicken-wire appearance of fibrolipoma (H and E, stain; 100X original magnification).

It is important to distinguish whether the lipoma is present as a single lesion or one of the multiple lesions, to rule out the presence of an associated syndrome. Syndromes associated with lipomas include Adiposidolorosa, Neurofibromatosis, Benign symmetric lipomatosis (Madelung syndrome), Bannayan-Riley-Ruvalcaba syndrome, Cowden syndrome, Proteus syndrome and Gardener syndrome⁹.

The recommended treatment for fibro-lipomas is an exploration and surgical excision. It bulges out of the wound site because of the fatty nature of the tumor and is surrounded by a very thin capsule around the lobulated mass. A pericapsular excision will give excellent results. Although they show a benign course, but removal of the mass for esthetic and functional purposes is desirable. Excision of the mass is curative for the condition and even though recurrences are known to be rare, there have been reports of long standing cases getting converted to liposarcomas¹⁰. The present case was treated with surgical excision (figure-6) and a post-operative follow-up of 6 months have shown no signs of recurrence.



Figure 6: Post-operative view of the surgical site

CONCLUSION

Fibro-lipoma represents a rare histologic variant of lipoma with an increased growth potential when compared to classic lipomas. There are many soft tissue lesions which clinically appear similar with overlapping of features causing diagnostic dilemma for the clinicians. Therefore, in such circumstances histopathological examination becomes the gold standard in the final diagnosis, proper treatment planning for a better cosmetic and prognostic result.

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