Case Report

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Dermatofibroma Over The Scar – A Rare Entity

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Abstract

Dermatofibroma is a common benign dermal tumour of unknown aetiology. With varied clinical presentation mimicking keloid, desmoid tumour and leiomyoma, the diagnosis of Dermatofibroma sometimes become problematic from the clinician side. Here, we report a case of Dermatofibroma in a not so common site which was clinically diagnosed to be a keloid. But later, the lesion turned out to be a dermatofibroma on histopathological examination. In our patient, the lesion was a single smooth circumscribed nodule over the left side of the abdomen. The lesion had a linear scar on either side and on palpation; it was firm in consistency. It was initially diagnosed to be a keloid which even after multiple intra-lesional steroid injections, failed to show any results. This prompted us to search for an alternate diagnosis; hence lesion was excised and analyzed. The Histopathological examination revealed a circumscribed lesion in the dermis, composed of benign spindle-shaped cells arranged in a storiform pattern. These findings, as mentioned above, were consistent with a diagnosis of Dermatofibroma, which is a slow-growing tumour commonly seen in the extremities. The keloid like a presentation of Dermatofibroma, is one another example of how a similar morphological presentation may have two distinct diagnoses resulting in a delay in providing appropriate treatment.

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INTRODUCTION

Dermatofibroma also known as fibrous histiocytoma, or sclerosing hemangioma is one of the most common benign mesenchymal neoplasms. This tumour occurs due to the reactive proliferation of fibroblasts (Myers *et al.*, 2020). It is usually seen on the extremities in mid-adults with a slight female predominance (Pusztaszeri *et al.*, 2011). The aetiology of Dermatofibroma is usually unknown but may occur following trauma suggesting a reactive or reparative process. It usually presents as single or multiple papules or a nodule or a plaque with overlying skin colour being red to brown because of higher intraepidermal melanin or tumoral hemosiderin.

The diagnosis of Dermatofibroma is primarily clinical. The 'Dimple sign' characteristic of Dermatofibroma can be elicited by side-to-side compression of the lesion. This produces a characteristic dimple due to the tethering of overlying epidermis to the lesion beneath. This is also called a Fitzpatrick sign and can also be elicited by keeping an ice cube over the lesion (Patel *et al.*, 2011).

Several histological variants are seen in Dermatofi-

broma. These include cellular, aneurysmal, epithelioid, atrophic, polypoid, Dermatofibroma with spreading satellitosis, a keloidal, atypical variant with monster cells & deep Dermatofibroma (Parish *et al.*, 2012).

Dermatoscopy may be a useful tool in diagnosing Dermatofibroma, where a peripheral pigment network with a central white area is seen (Zaballos *et al.*, 2008).

CASE REPORT

A 67 old female with a previous history of abdominal surgery 25 years back presented to our OPD with complaints of skin coloured raised lesion over the abdomen associated with mild itching for the past 18 months. Routine systemic examination was normal. Dermatological examination revealed a single, smooth, well-circumscribed nodule of 1×1 cm with no surface changes present over the left side of the abdomen. There was a linear scar on either side of this lesion. On palpation, it was fixed and firm [Figure 1]. We initially diagnosed it as keloid and treated it with multiple sessions of Intra-lesional corticosteroid injections. But the lesion did not respond to the injections and also developed atrophy of the surrounding skin. Hence other differentials like Dermatofibroma, desmoid tumour, leiomyoma were considered, excision biopsy was done and sent for histopathological examination.

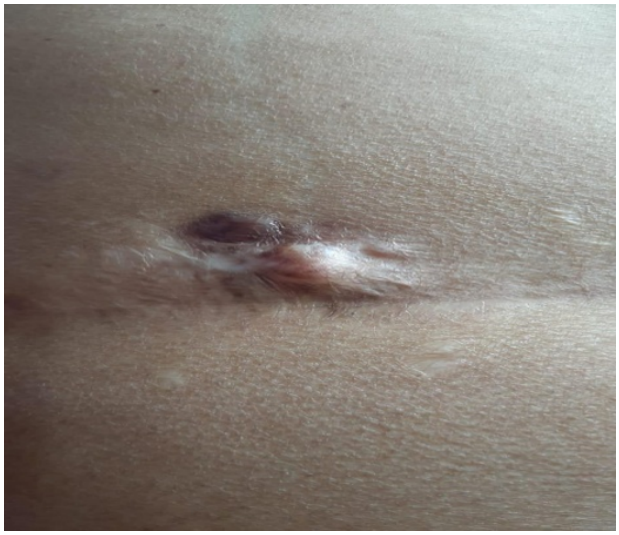

Figure 1: Showing single well-circumscribed nodule in the patient

The HPE revealed skin with atrophic epidermis and dermis showing a circumscribed lesion composed of benign spindle-shaped cells arranged in a storiform pattern. The lower part of the lesion showed few trapped adipocytes. No pleomorphism or mitotic figures seen. These findings were consistent with Dermatofibroma [Figure 2].

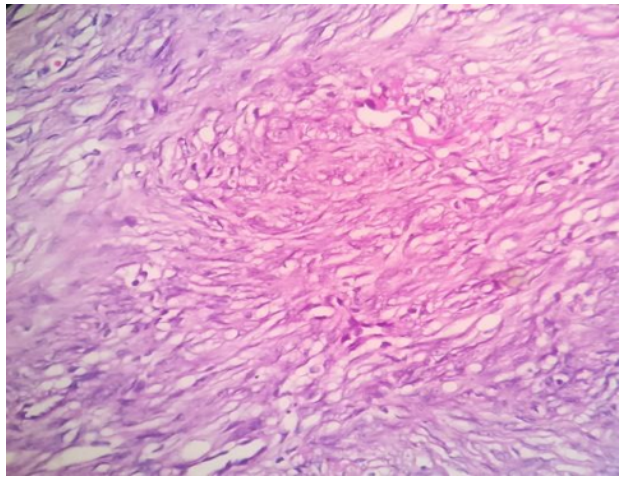

Figure 2: Histopathology showing a circumscribed lesion in the dermis composed of benign spindle-shaped cells arranged in a storiform pattern

DISCUSSION

Cutaneous Dermatofibroma is a benign slow-growing soft tissue tumour, often presenting as single or multiple firm yellow-brown or red-brown nodules. It is commonly seen on the extremities, rarely on palms, soles, fingers, genitals, head and neck (Bandyopadhyay *et al.*, 2016; Parish *et al.*, 2012). Although asymptomatic, itching and tenderness may be present (Zelger *et al.*, 2004). It usually presents as a solitary lesion, and rarely multiple lesions are found which is commonly associated with autoimmunity or altered immunity. 'Dimple sign' can be elicited by lateral compression of the lesion. This is due to the tethering of overlying epidermis to the lesion beneath. This is also called a Fitzpatrick sign and also elicited by keeping an ice cube over the lesion (Patel *et al.*, 2011).

In our case, the lesion was a solitary nodule of 18-month duration, firm in consistency without an increase in size. Dimple sign was negative. It was non-responsive to multiple intralesional steroid injections. Failure to respond to the treatment prompted us to do an excision biopsy which revealed Dermatofibroma with classical findings.

Clinically, differential diagnosis including keloid, hypertrophic scar, desmoid tumour (Kaur *et al.*, 2014), dermatofibrosarcomaprotuberans (Zelger *et al.*, 2004), leiomyoma (Singh *et al.*, 2010) should be considered.

Histologically, in Dermatofibroma, the epidermis will be hyperplastic with increased pigmentation of the basal layer (known as 'Dirty fingernail

sign') (Parish *et al.*, 2012). The tumour present in the mid dermis would have whorled fascicles of spindle cell proliferation and excess collagen. Various histopathological variants have been described. Dermoscopy may also aid in our diagnosis where peripheral pigment network with a central white area, though we haven't done that in our case.

Treatment is not necessary. Reassurance is given regarding the benign nature of the tumour. Complete surgical excision is ideal, though intralesional steroids, superficial shaving or cryotherapy, CO2 laser, pulsed dye laser have been tried with varying results (Shankar *et al.*, 2007; Alonso-Castro *et al.*, 2012).

CONCLUSIONS

Dermatofibroma is a common tumour with varied presentations. Keloid like presentation is one of the rare forms which is usually associated with trauma and often misdiagnosed to be a Keloid as in our case. In such a case, giving due importance to all the differentials and in-depth clinical examination with the use of aids like biopsy or dermoscopy or both may narrow down the chances of making an error.

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Conflicts of interest

The authors declare that they have no conflict of interest for this study.

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