

## Solitary painful pigmented nodule on left arm

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### CLINICAL FINDINGS

A 19 years old female student presented to our clinic with painful nodule on her left arm for 2 years. The lesion was slightly painful, non-itchy and stable in size. On examination there was 1cmx1cm brown to dark brown nodule on the left arm. The lesion was slightly tender on pressure, firm in consistency and dimple sign was positive. Full skin exam was free (Fig. 1, 2). Routine blood work was within normal range.



**Fig. 1** Brownish reddish nodule on the upper arm.



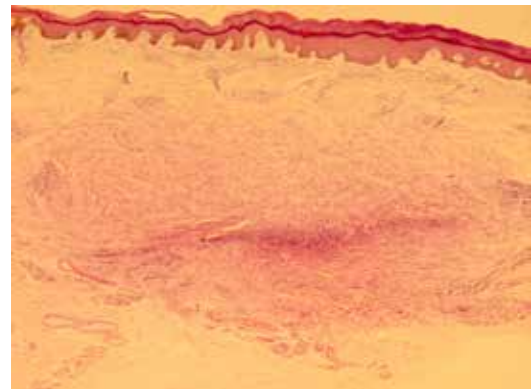
**Fig. 2** A nodule with firm consistency.

### What is your clinical diagnosis?

1. Compound melanocytic nevus
2. Xanthoma
3. Dermatofibroma
4. Spitz nevus

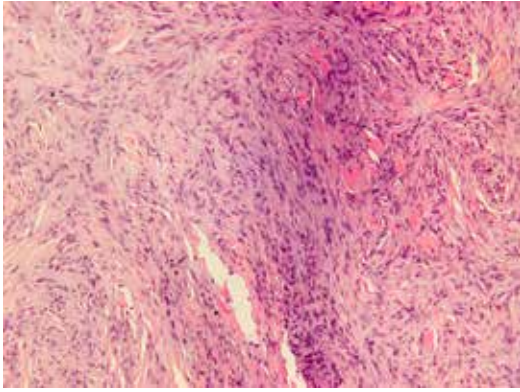
### HISTOPATHOLOGICAL FINDINGS

Excision biopsy was done to confirm the diagnosis and the report showed non capsulated dermal mass in mid dermis, separated from the epidermis by free zone. The overlying epidermis showed hyperkeratosis and acanthosis with increased melanin pigmentation at basal cell layer. Dermal mass formed of epithelioid cells and spindle shaped cell scattered in different directions and surrounding some of the collagen bundles. On high power collagen bundles were surrounded by tumor cells at the periphery of mass (Fig. 3,4, 5).

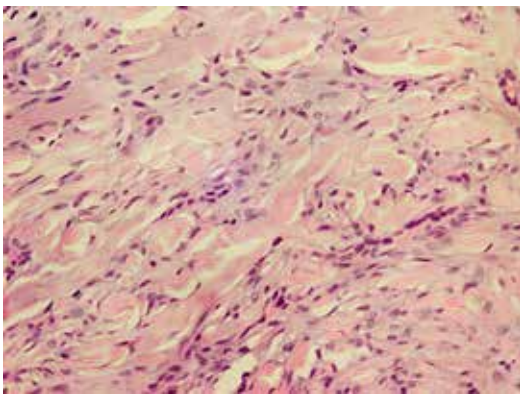


**Fig. 3** Non capsulated dermal mass in mid dermis separated from the epidermis by free zone. The overlying epidermis showing hyperkeratosis and acanthosis with increased melanin pigmentation at basal cell layer.

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**Fig. 4** Dermal mass formed of epithelioid cells and spindle shaped cell scattered in different directions and surrounding some of the collagen bundles.



**Fig. 5** Collagen bundles surrounded by tumor cells at the periphery of the dermal mass.

## DIAGNOSIS

### Dermatofibroma

## DISCUSSION

Dermatofibromas are common benign tumors, accounting for almost 3% of specimens received by any dermatopathology laboratory. There is a predilection for the extremities, particularly the lower extremity of young adults. There is a female preponderance. Rare sites of involvement include the fingers, palms and soles, scalp, face, vaccination scar, and within a tattoo.<sup>1</sup>

Clinically, dermatofibromas are round or ovoid, firm dermal nodules, usually less than 1 cm in diameter. A 'giant' variant has been recorded. It preferentially develops on the lower limbs.

Satellitosis is a rare finding at the edge of a giant dermatofibroma. Other clinical variants like polypoid, flat, atrophic, and depressed configurations have also been described in the literature. Both, the Meyerson phenomenon and a halo of asteatotic eczema have been reported around a dermatofibroma.<sup>2</sup>

Lesions with a preponderance of histiocytes are often larger, and the aneurysmal (angiomatoid) variants may measure up to 10 cm in diameter. Dermatofibromas are usually dusky brown in color. But, aneurysmal variants may be red, and tumors with abundant lipid can be yellow in appearance, particularly on the cut surface of the excised lesion. They often show a characteristic central white, scar-like patch on dermatoscopic examination, and a delicate pigment network at the periphery. Other findings that have been recorded, include homogeneous blue pigmentation simulating a blue nevus.<sup>3</sup>

Dermatofibromas are most often solitary, but 2-5 lesions are present in 10% or so of individuals.<sup>4,5</sup> Multiple lesions have been reported, usually as a rare complication of immunosuppressive therapy or the acquired immunodeficiency syndrome. Eruptive lesions have been shown to appear after the commencement of highly active anti-retroviral therapy (HAART), and in other clinical circumstances. Familial eruptive dermatofibromas have also been reported. There are only a few reports of patients with large numbers of tumors; one such case was reported as 'disseminated dermal dendrocytomas'. This case may have been a different entity - progressive nodular histiocytosis. Clinical variants include the aneurysmal type, already referred to, and the rare annular hemosiderotic histiocytoma in which multiple brown papules in annular configurations

were present on the buttocks.<sup>6</sup> Some authors regard the hemosiderotic dermatofibroma as an early stage in the development of the aneurysmal variant. Some aneurysmal lesions may recur. Spreading satellitosis has been reported in one case.<sup>7</sup>

The histopathological pictures usually shows acanthotic epithelium with basilar hyperpigmentation (dirty feet) over a dermal spindle cell proliferation and Collagen trapping by the dermal fibrohistiocytic infiltrate. The subcutis typically is preserved, but if involved (especially when a storiform [cartwheel] pattern is observed), one should be alert to the possibility of the lesion being a dermatofibrosarcoma protuberans (DFSP).<sup>11</sup> Antibodies toward factor XIIIa and CD34 are useful in distinguishing the two tumors, with the former suggesting dermatofibroma and the latter suggesting DFSP.<sup>8-11</sup>

Surgical excision (including shave excision) is the usual method of treatment. Recurrence is uncommon, even in cases with positive margins. Two exceptions to this statement exist, which are as follows: The cellular variant, which often extends into the subcutis, and dermatofibromas of the face. Which need to be excised with wider margins than the classic type to prevent recurrence.<sup>12,13</sup>

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