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PhotoDermDiagnosis

Asymptomatic skin colored papules on the forehead and scalp

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A 42-year-old female patient presented with a 10-year history of multiple, asymptomatic discrete papular lesions on her forehead and scalp **(Figure 1)**. There was initially only one lesion on the right side of the forehead which slowly expanded to reach a size of 1 cm, and was followed by development of similar lesions on the forehead, frontal hairline and scalp. They were persistent and slow growing, reaching a maximum size of 1cm, firm in consistency and non-tender. The surface was smooth, with no overlying skin changes. The patient reported a minimal increase in size during the summer and shrinkage in the winter. There was no history of other systemic involvement of any use of topical medication in the area involved. There was no family history of similar lesions.

The rest of the cutaneous and systemic examination did not yield any positive findings.

Baseline laboratory investigations including a complete blood count, liver and renal function tests, and serum electrolytes were normal. Histopathological examination showed a normal epidermis, a Grenz zone of papillary dermal sparing, and an ill-defined dermal lesion composed of interlacing fascicles of spindle shaped cells. Focal storiform pattern of arrangement was identified in a few places, interspersed with loose collagenous stroma and dilated thin-walled blood vessels in the dermis **(Figure 2)**.

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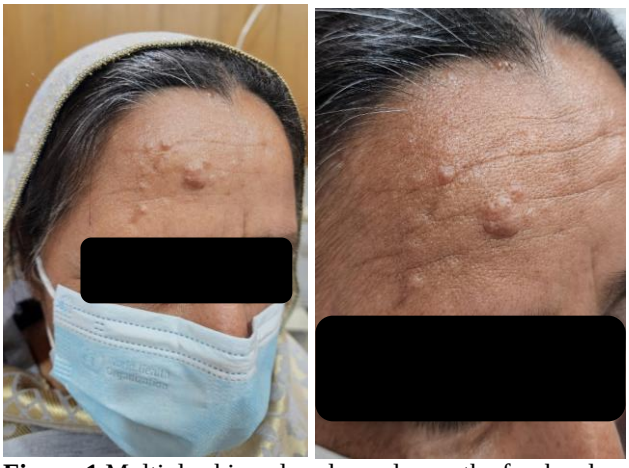

Figure 1 Multiple skin colored papules on the forehead

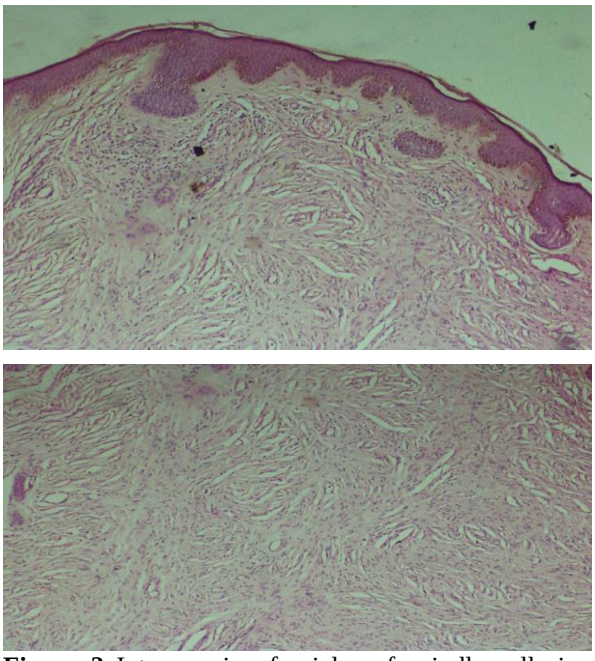

Figure 2 Interweaving fascicles of spindle cells in the dermis, with a storiform appearance.

What is your diagnosis?

Diagnosis

Dermatofibroma (Fibrosing Histiocytoma)

Discussion

Dermatofibroma, also known as a Fibrosing Histiocytoma, is a fibrosing dermatitis that displays a collection of dermal fibrocytes which may occasionally extend into the subcutis. Other inflammatory cells, such as lymphocytes, macrophages, rarely eosinophils and plasma cells may also be present. There are dense collagen bundles present, often in a haphazard pattern.[1] This benign lesion is seen very commonly, occurring usually in adult age and having a slight female preponderance.[3] The clinical appearance is that of a round or oval firm dermal lesion, usually less than 1cm.[4] This non-tender nodule may be skin colored or have overlying pigmentary changes, depending upon the age of lesions.[2]

There are two opinions as to the origin of a dermatofibroma, with some authors regarding it as a reactive process and others, a neoplastic one.[2,5] Patients presenting with dermatofibromas will often give history of trauma such an insect bite or a thorn prick.[2] There are many different variants of Dermatofibroma based on the histological findings. It is these variants that present the diagnostic difficulty for physicians. The typical histological appearance of a common dermatofibroma has prominent fibrocytes, spindled cells and coarse collagen bundles arranged in interweaving fascicles that make a "storiform"[1] or "cartwheel" appearance. There may also be collagen bundles present that are individually surrounded by lesional cells and giving a hyalinized or sclerotic appearance. This dermal lesion is often separated from the overlying epidermis by a clear Grenz zone. The epidermis may display any of the findings of hyperkeratosis, acanthosis, pseudo-epitheliomatous hyperplasia, or hyperpigmentation of stratum basale.[3] Variants of dermatofibroma include aneurysmal,[6] cellular, epthelioid, lipidized, clear cell, atrophic, keloidal, palisading, granular cell, lichenoid, balloon cell, and signet-ring cell varieties. These have different predominant cell types but do also exhibit the typical features.

Dermatofibromas are benign lesions with a usually excellent prognosis. Recurrence has been reported but rates are very low.[2] Surgical excision is the treatment modality employed in most clinical settings. Re-excision may be considered in atypical variants to ensure clear margins. Cryotherapy is also an efficacious and easily tolerated therapy for cutaneous fibrous histiocytomas, especially for use in people with an established clinical diagnosis and in areas associated with scar formation.[7] The use of fractionated Carbon dioxide can also be considered for a bloodless excision of the lesion and it has the added advantage of reducing the fibroblast growth factor secretion, and hence decreasing the chances of recurrence in the lesion.[8]

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