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MULTIPLE DERMATOFIBROMAS WITH UNUSUAL FEATURES

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A 51-year-old-male with multiple dermatofibromas over both elbows and feet is reported for its rarity and unusual features.

Key Word : Dermatofibroma

Introduction

Dermatofibroma, a common circumscribed acquired tumour, most often occurs as a solitary lesion and less frequently as multiple lesions.[1] The cutaneous lesions are nodules which are indolent, flat or slightly elevated, and usually firm or hard to touch. They invariably demonstrate the dimple sign on application of lateral pressure with the thumb and index finger.[2] They are most commonly seen over the extremities but rarely manifest over the palms and soles.[3] Herewith we report a case of multiple dermatofibromas with unusual bulbous deformities of the great toes and plantar involvement.

Case Report

A 51-year-old male presented with a history of multiple nodules on both the elbows that were gradually increasing in size for the last 1 year and over both great toes and the heel of the left foot for six months. The lesions over the elbows were painful on touch, whereas the others were asymptomatic. There was no relevant past medical history. Grossly, eight firm tumours were present, five on the elbows and three on the feet. The nodules on the elbows (Fig. 1) were dark brown, discrete, firm, 1-2 cm in diameter, mobile and tender on touch. Besides a single 4 cm-sized nodule on the heel of the left foot, there were bulbous deformities of the great toes resulting from the coalescence of multiple nodules (Fig. 2). Other cutaneous and systemic examinations were unremarkable.

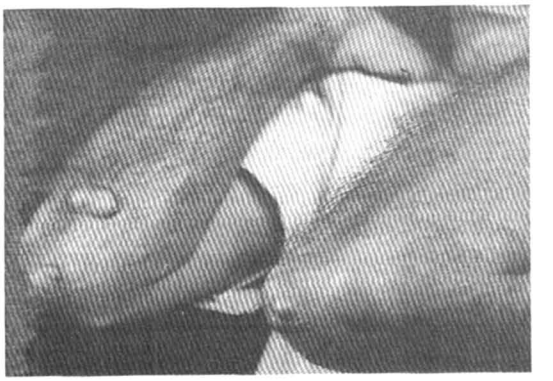

Fig. 1. Nodular lesions over both elbows.

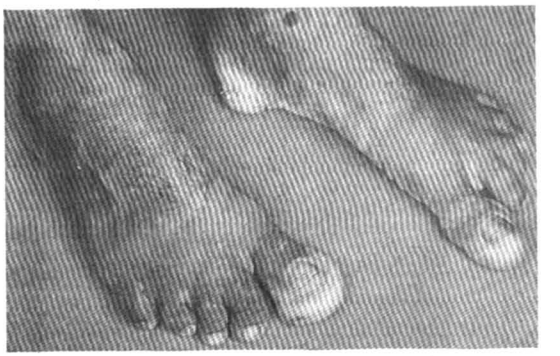

Fig. 2. Bulbous deformity of both great toes with tumour-like lesion over the heel.

Histopathologic examination of the elbow nodule revealed that the tumour was located at the dermo-subcutaneous junction,

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and was composed of two types of cells arranged in nodules. Some tumour cells were round-to-polygonal in shape with a foamy cytoplasm and a small nucleus. Admixed with these cells were spindle-shaped to plump cells with a eosinophilic cytoplasm and a reticular nucleus. There were also scattered neutrophils. A biopsy specimen from the great toe lesion showed a dermal tumour consisting of spindle-shaped cells arranged in whorls and interlacing bundles. A cartwheel appearance was seen in areas. In between these spindle-shaped cells were histiocytes. No mitotic figures or pleomorphism were seen (Fig. 3). The

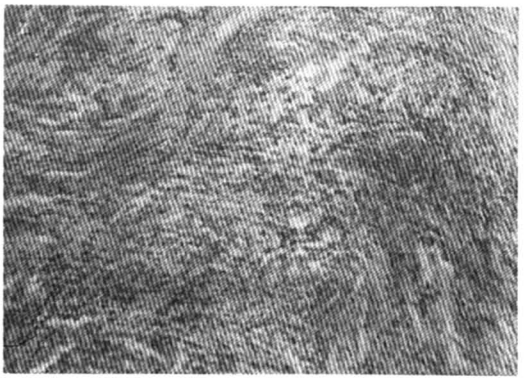

Fig. 3. Spindle cells arranged in whorls and interlacing bundles. Cartwheel appearance is seen in areas. There are histiocytes among these spindle cells. (H&E x 100).

epidermis was normal except for basal cell hyperpigmentation. These features were suggestive of benign fibrous histiocytoma.

Discussion

Dermatofibroma, originally described by Unna[4] in 1894, shows marked variability in the cell population of each individual lesion. It is this variation that makes the diagnosis of dermatofibroma sometimes difficult. The lesions are composed of varying combinations of fibroblasts, young collagen, mature collagen, capillaries and histiocytes. Thus, they have a spectrum extending from lesions mainly composed of fibroblasts and collagen (fibrous variant) to lesions composed of a significant proportion of histiocyte-like cells with a vascular component and presence of giant cells (cellular variant).[5] Deposits of lipid or hemosiderin within tumour cells are found in one-third of cases. In addition, epidermal hyperplasia and basal cell layer hyperpigmentation of the overlying skin are often characteristic.[6]

Dermatofibromas rarely involve the palms and soles,[3] and occasionally measure 2-3 cm in diameter.[6] Our patient presented with large lesions with involvement of the toes and sole, a rare finding. It needs to be differentiated from dermatofibrosarcoma protuberans. This usually manifests as a single, larger nodule with the histopathologic features of monomorphous type of infiltrate, a prominent cartwheel or storiform pattern, larger cell nuclei showing abundant mitosis, and infiltration of the subcutaneous tissue. It is rare to find lipid or hemosiderin deposits in the histiocytes.[5,6] Except for the size of lesions, the other features were compatible with the diagnosis here.

Clinically the elbow lesions mimicked tuberous xanthomas, though the microscopic features were suggestive of dermatofibroma.

Dermatofibroma commonly presents as a single lesion; in a series of 379 patients only 29 (8%) possessed more then two lesions.[7] Twenty-one (22%) of a series of 95 patients had two to five histiocytomata.[8] It was indeed intriguing to observe multiple dermatofibromas (eight in number) with resultant bulbous deformities of the greet toes in our case Recently, several reports have described the development of multiple dermatofibromas following immunosuppression,[9,10] but no such history

was forthcoming in this case.

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