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CLINICAL IMAGE

Multiple eruptive dermatofibromas associated with altered immunity and systemic lupus erythematosus

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Presentation

A 29-year-old female with systemic lupus erythematosus (SLE) presented with multiple eruptive skin tumors within 3 months after immunosuppressive therapy of prednisolone 5 mg, mycophenolate mofetil 540 mg, and cyclosporine 25 mg twice per day for lupus nephritis. Dermatologists were consulted to evaluate the possibility of skin cancers, given the patient's immunosuppression status. Physical examination revealed more than eight hyperpigmented, brownish papulonodules on the trunk and extremities (Fig. 1). Multiple eruptive dermatofibromas (MEDFs) were diagnosed based on consistent clinical presentation and histopathological features of dermatofibroma (DF). During the follow-up period, the levels of C3 and C4 complement components were within normal ranges (C3: 90–180 mg/dL; C4: 10–40 mg/dL); the antinuclear antibody titer remained unchanged at 1:1280 with a fine speckled pattern. The activity of SLE remained stable without deterioration of renal function or adjustment of immunosuppressive therapy. The number and size of DFs were also stabilized.

Discussion

MEDFs were referred to as 5–8 DFs developing within 4 months [1, 2]. MEDFs have been associated with underlying immune-mediated diseases, mostly SLE, human immunodeficiency virus infection, and hematologic malignancies, and may warrant a complete workup and evaluation if the underlying disease has not been diagnosed [1–3]. Intake or increased dosage of immunosuppressants for immune-mediated diseases, such as corticosteroids and cyclophosphamide, can alter the immune status and may further facilitate the formation of MEDFs [1, 2]. Immunosuppressant-induced down-regulatory T cell dysfunction may contribute to the immunoreactive process, and immunosuppressants can impair immunosurveillance, consequently resulting in the development of MEDFs [1]. According to a systematic review, some SLE patients developed MEDFs without taking immunosuppressants, while others developed MEDFs after the beginning of immunosuppressive therapy [2].

It is well established that immunosuppressed patients are at significantly greater risk of developing cutaneous malignancies [4]. Increased risk of non-melanoma skin cancers (NMSCs) has been observed among patients with connective tissue diseases or on cumulative doses of immunosuppressants [5]. The risk was even higher in those receiving long-term immunosuppressants for connective tissue diseases. In contrast to NMSCs, aggressive treatments for MEDFs are not suggested due to the benign nature. The clinical

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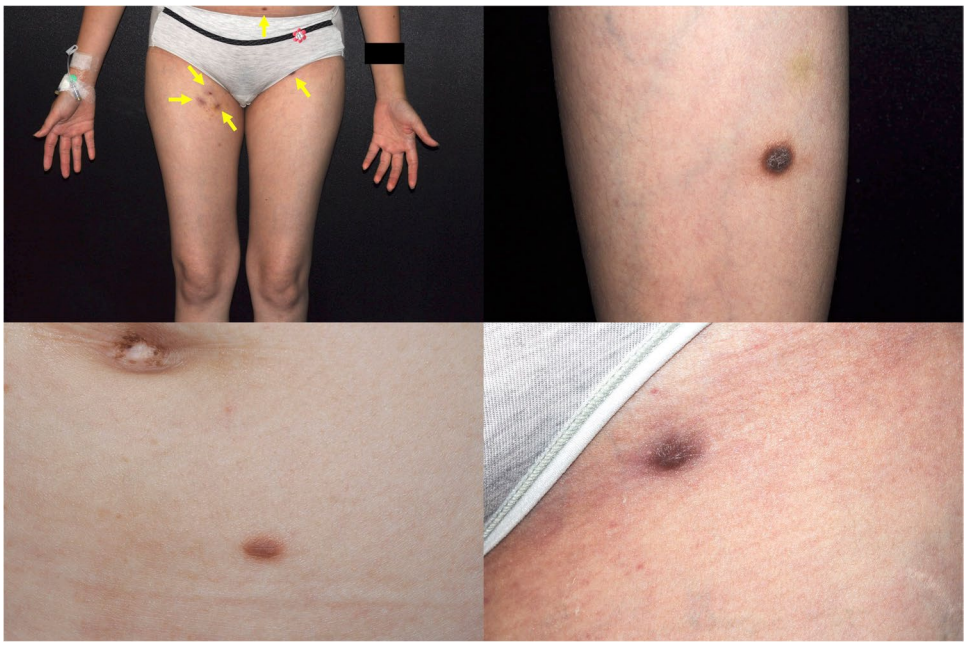

Fig. 1 Multiple eruptive dermatofibromas on the trunk and extremities (number of lesions ≥ 8) in a 29-year-old female with systemic lupus erythematosus (arrow, dermatofibroma)

diagnosis of DFs is generally straightforward and can be made based on the presence of the dimple sign on physical examination and characteristic dermoscopic findings, including a central white scar-like patch surrounded by a peripheral pigment network [6]. However, in cases with rapid enlargement, ulceration, and atypical dermoscopic features, a skin biopsy is required to make a definite diagnosis [7].

Author contribution All authors substantially contributed to the collecting of data and drafting of this manuscript and also approved the final version.

Data availability No new data were created or analysed in this study. Data sharing is not applicable to this article.

Declarations

Patient consent The authors have obtained patient consent for publication of her clinical history and clinical photographs and include the written consent as a supplementary material.

Disclosures None.

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