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RESEARCH ARTICLE

MYCOSIS FUNGOIDES AND DUBREUILH'S MELANOMA: AN UNUSUAL ASSOCIATION

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Abstract

Introduction:-

Mycosis fungoides (MF) is one of the primary cutaneous lymphomas characterized by a malignant, monoclonal proliferation of CD4 T lymphocytes in the skin. The occurrence of associated cancers such as non-Hodgkin lymphoma, lung cancer, or colon cancer has been reported in the literature. However, the association of melanoma with MF has been the subject of only a few case reports. We report the case of a patient in whom MF was diagnosed simultaneously with Dubreuilh's melanoma.

Report of a case

A 76-year-old patient presented with a two-month history of pruritic dry erythroderma. Clinical examination revealed dry erythroderma associated with fissured plantar keratoderma and firm, mobile centimetric inguinal lymphadenopathy. Furthermore, a well-defined brown plaque with irregular borders was observed on the nose, and dermoscopy showed a target-like appearance, involvement of hair follicles, and an abrupt cessation of pigmentation. Biopsy of the erythrodermic skin revealed epidermotropic involvement of the epidermis and hair follicles with CD3 and CD4 staining. For the pigmented lesion on the nose, histological examination confirmed an appearance consistent with Dubreuilh's melanoma. The staging was normal. The patient was a candidate for surgical excision of the melanoma and systemic treatment of the lymphoma.

Discussion:-

Mycosis fungoides accounts for approximately 50% of all cutaneous lymphomas and around 65% of cutaneous T-cell lymphomas. Several case reports have highlighted a higher prevalence of melanoma in patients with MF [1,2,3]. The explanation for this association remains unclear, but it seems that various therapeutic modalities for MF are involved in the development of melanoma due to the systemic immunosuppression they induce (PUVA therapy, total body electron beam therapy, and the use of nitrogen mustards) [1]. However, this explanation is not plausible for melanomas occurring before the diagnosis of lymphoma [2]. In such cases, a common genetic component predisposing to both conditions is more likely [2]. This may involve mutations in the CDKN2A gene, which codes for the tumor suppressor protein p16 found in both malignancies [3]. In the literature, most cases of melanoma preceding MF were associated with early stages of the lymphomatous disease. Moreover, at advanced stages of MF, systemic immunosuppression induced by lymphoma may explain its association with melanoma, given the low

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circulating CD4 count [3]. Generally, at this stage, the skin tumor is often of poor prognosis. The uniqueness of our case lies in the occurrence of lentigo maligna, which is known to be a melanoma of long evolution, diagnosed in a patient with erythrodermic mycosis fungoides. In this scenario, systemic immunosuppression induced by advanced MF does not explain its association with a long-evolving melanoma. The advanced stage of lymphoma and the long history of melanoma may be explained by UV exposure. UV radiation causes cutaneous immunosuppression and is implicated in the development of melanoma. MF responds to PUVA therapy, but this does not exclude the possibility that UV exposure contributes to its pathogenesis. Indeed, UV-specific p53 mutations have been detected in MF, especially in the tumoral stage of the disease [1].The increasing prevalence of melanoma occurring in patients with primary cutaneous lymphoma should prompt us to carefully examine and search for suspicious lesions in this population. The association of erythrodermic MF with long-evolving Dubreuilh's melanoma is the first reported case in the literature to our knowledge

Conclusion:-

The increasing prevalence noted of the occurrence of melanoma in patients with primary cutaneous lymphoma should prompt us to meticulously examine and search for suspicious lesions in this population. The association of erythrodermic MF with a long-evolving Dubreuilh melanoma is the first case reported in the literature to our knowledge.

Figure1:- Dry erythroderma with significant weight loss in a patient with a chronically evolving brown macule on the nose.

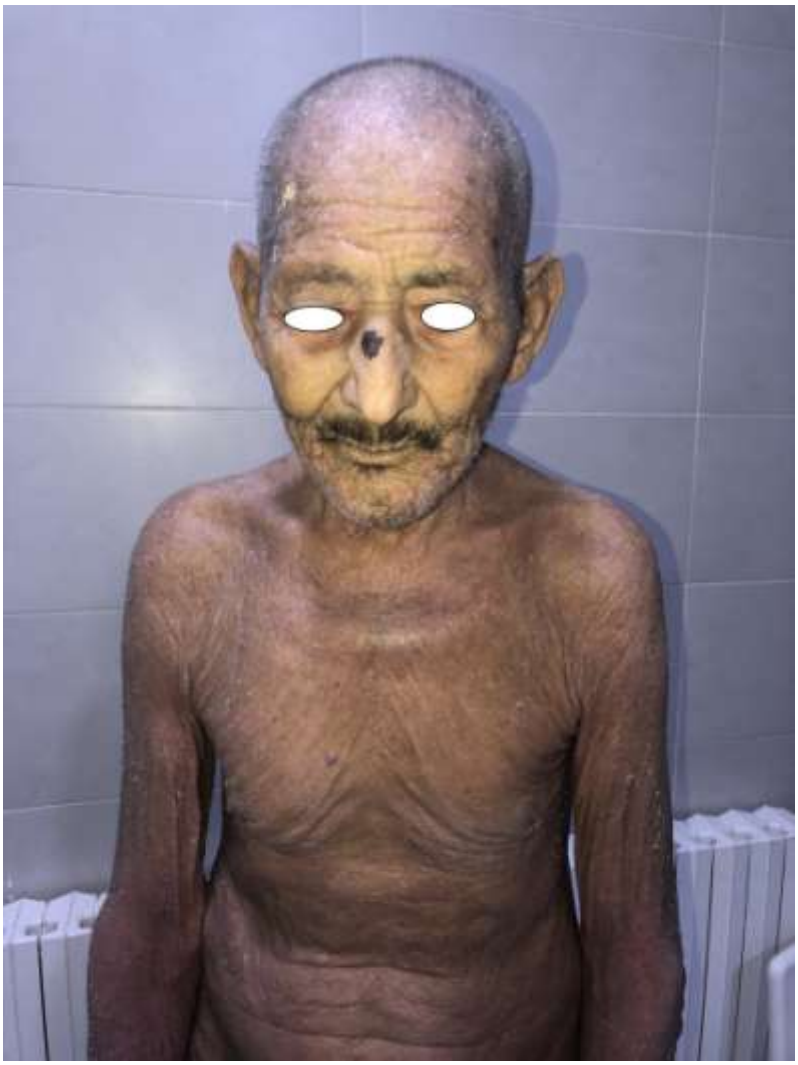


Figure2:- Dermoscopy of the brown macule on the nose indicative of Dubreuilh's melanoma: double-circle appearance (black arrow) and invasion of follicular openings (white star).

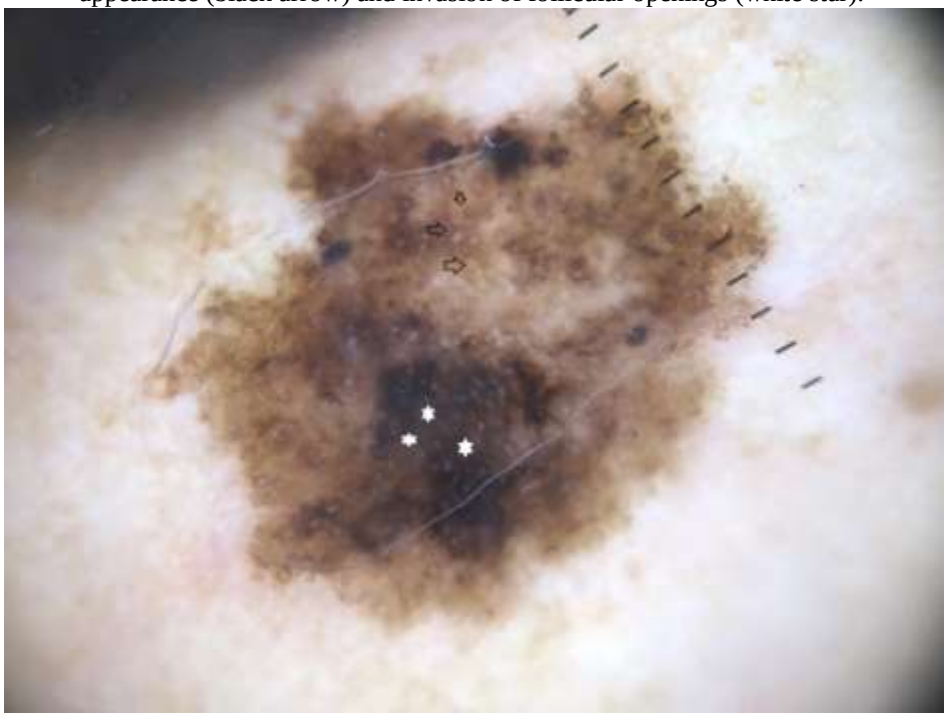
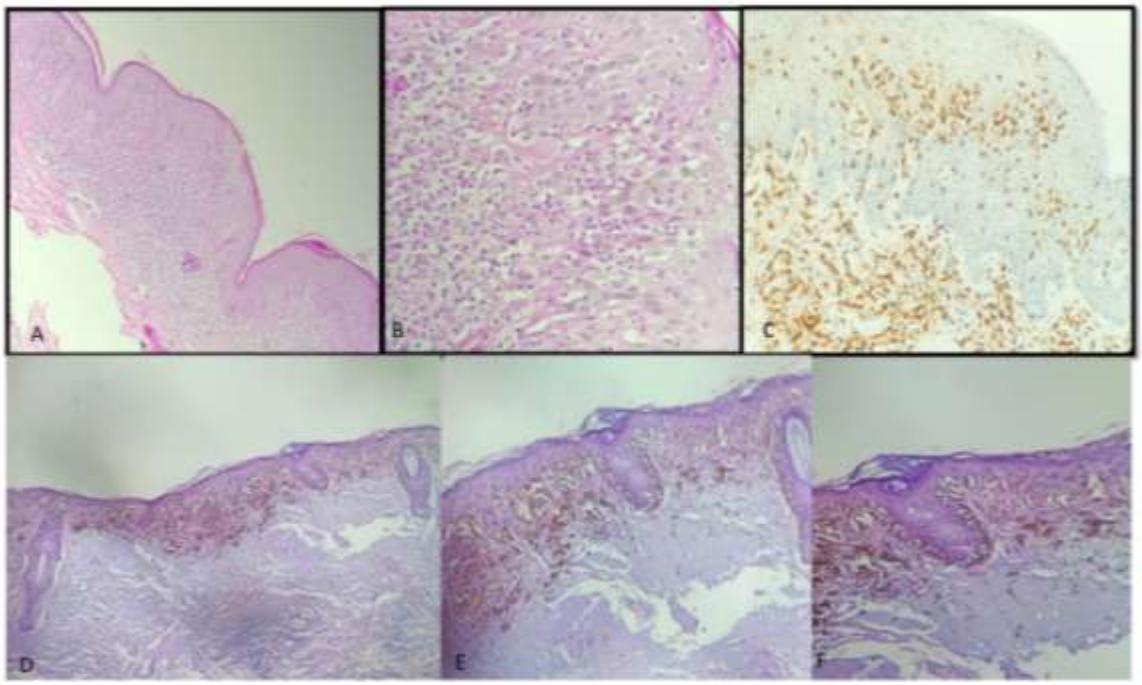


Figure3:- Histological and immunohistochemical images of a biopsy from the body show: A) Cutaneous tissue with a subepidermal band-like lymphoid infiltrate (HES x 100) .B) The infiltrate is composed of atypical lymphocytes with evidence of epidermotropism (HES x 400). C) Anti-CD4 antibody stains the atypical lymphocytes in the dermal and epidermal layers.Histological image of the biopsy from the nose shows: Cutaneous tissue with atypical epidermal melanocytic proliferation in a lentiginous growth, with extension to pilar follicle and focal signs of invasion of the papillary dermis (D ,E ,F) (HES x 100, x 200, x 400).



Conflicts of interest
The authors do not declare any conflict of interest

Consent :
The examination of this patient was conducted according to the Declaration of Helsinki principles.

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