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Topic: Atopic dermatitis/ Eczema

Mycosis Fungoides and atopic dermatitis: What's the link?

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Introduction
The risk of cutaneous lymphoma in patients with severe atopic dermatitis (AD) is still debated.

Materials and Methods
Herein, we report the case of folliculotropic mycosis fungoides (F-MF) in a patient with a long history of severe atopic dermatitis.

Results
A 47-year-old man presented to our dermatology department with generalized infiltrated nodules and plaques evolving for 7 months. He had been followed for 8 years for severe atopic dermatitis, initially diagnosed based on the Hanifin and Rajka criteria. His atopic dermatitis had been partially controlled for several years without the need for systemic therapy. In the current episode, he presents with a new symptomatology. Physical examination revealed generalized infiltrated plaques and erosive nodules associated with alopecic patches on the face, a leonine facial appearance associated with axillary and inguinal lymphadenopathy. The laboratory results revealed peripheral blood eosinophilia ($2.6\ 10^9$ /L) and elevated serum immunoglobulin E level (11700 IU/mL). Biopsy and immunohistochemical analysis confirmed the diagnosis of folliculotropic mycosis fungoides (FMF) with follicular mucinosis and neoplastic infiltrate strongly positive for CD3, CD4 and negative for CD8 with rare positive cells (10%) for CD30. After staging assessment, the patient was diagnosed with FMF stage T3N1M0B0, clinical stage IIB and was treated with chemotherapy (CHOEP). Atopic dermatitis has been significantly associated with an increased risk of cutaneous lymphoma, supporting the hypothesis that MF may arise on chronic AD lesions rather than merely mimicking them. Factors common to both diseases include the crucial role of CD4+ T cells, the background of cytokines, the potential role of anti-immunoglobulin E antibodies and bacteria superantigens. Several reports describe MF emerging in patients with severe, persistent AD, including cases in which disease progression became evident during anti–Th2 therapy such as tralokinumab or dupilumab. Immunopathologic studies have shown that AD and MF share a distinct Th2-skewed T-cell subset with autonomous proliferative potential.

Conclusions
Overall, the association between severe AD and MF likely reflects chronic lymphocyte stimulation leading to the expansion of a dominant clone, potentially aggravated by prolonged immunosuppressive therapy in some patients.