

Plasmacytoid dendritic cells are present in cutaneous dermatomyositis lesions in a pattern distinct from lupus erythematosus

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Abstract

Background: Plasmacytoid dendritic cells (PDCs) are CD123-positive dendritic cells (DCs) capable of producing interferon- α (IFN). They are thought to play a role in anti-viral immunity and the pathogenesis of lupus erythematosus (LE). Given the histologic similarities between LE and dermatomyositis (DM), we evaluated the presence and distribution of PDCs in lesional skin of both diseases.

Methods: Twenty-eight biopsies of DM and 27 biopsies of LE were labeled with antibodies to CD123 to identify PDCs. The presence and relative distribution of CD123+ cells was recorded.

Results: PDCs are present in LE and DM, albeit in greater numbers in LE lesions. Interestingly, PDCs are preferentially located in the epidermis of DM, and are primarily located in the dermis of LE.

Conclusions: Skin lesions of DM contain PDCs. Because PDCs are thought to participate in the pathogenesis of LE, this finding suggests that they may play a role in DM as well. The preferential epidermal localization of PDCs in DM suggests that their contribution to disease pathogenesis or maintenance in DM may be distinct from LE. Finally, although not pathognomonic, the different patterns of PDC localization in LE

and DM may prove a helpful criterion for distinguishing between these two entities histologically.
