

Lupus and Lyme

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Clinical pathologic correlations of Lyme disease by stage.

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Lyme disease is capable of producing a wide variety of clinical pathologic conditions and lesions having in common histologic features of collagen-vascular disease. The plasma cell is an omnipotent inflammatory responder in most tissues involved by Lyme disease, ranging from relatively acute to lesions that have gone on for years. Vascular thickening also seems to be prominent, and in the dermis is accompanied by scleroderma-like collagen expansion. The disease in some ways resembles the responses seen in lupus erythematosus such as mild cerebritis with lymphocytes and plasma cells in the leptomeninges. Lymphoplasmacytic panniculitis of Lyme disease resembles lupus profundus, both in the infiltrate and the plasma cell-blood vessel relationship. The onion skin thickened vessels of the synovia resemble the vessels of lupus spleens, while the sclerodermoid thickening of the dermis and various skin lesions of stage III Lyme disease suggest a collagen-vascular disorder. Finally, the perivascular lymphoid infiltrate in clinical myositis does not differ from that seen in polymyositis or dermatomyositis. All of these histologic derangements suggest immunologic damage in response to persistence of the spirochete, however few in number.

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