

Neutrophilic Lobular Panniculitis with Non-rheumatoid Arthritis

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Sir,

Neutrophilic lobular panniculitis (NLP) was first described in 1988 by Newton & Wojnarowska (1) in a patient with rheumatoid arthritis. Since then, only three additional cases have been reported in the literature (2–4). All cases had been complicated with long-standing rheumatoid arthritis. Here, we report a patient who developed NLP without detectable level of serum rheumatoid factor.

CASE REPORT

A 55-year-old woman presented with multiple lesions of desquamous or non-desquamous erythema (0.5–1 cm in diameter) with slightly subcutaneous indurations on

upper and lower extremities (Fig. 1). The patient felt mild heat and pain around the lesions. Neither petechiae nor signs of trauma were observed. She had suffered from these lesions for 5 months. Some of them had spontaneously regressed, while others appeared elsewhere. She had been suffering from sharp pain in her right knee joint for more than 10 years. However, clinical examination and knee joint X-ray, complete blood cell count, C-reactive protein, rheumatoid factor, anti-nuclear antibody and other serum biochemistry analyses showed no abnormality that suggested rheumatoid arthritis or collagen diseases.

Histological examination of a lesion on the right leg revealed distinctive lobular panniculitis (Fig. 2). A small but extensive infiltration of neutrophils with nucleus



Fig. 1. Multiple subcutaneous indurations on anterior aspect of left lower leg (left). The surface of the skin lesion is reddish with slight tenderness (right).

debris was located in fat lobules surrounded by histiocytic infiltration. The septa showed mild fibrous thickening. Septal and intralobular vessels were surrounded by mild infiltrations of neutrophils and lymphocytes, some of which focally infiltrated into the vessel walls. Neither granulation tissue nor foreign body giant cells were observed.

DISCUSSION

Rheumatoid arthritis may be accompanied by cutaneous manifestations, such as rheumatoid granuloma, leukocytoclastic vasculitis and rheumatoid neutrophilic dermatitis (5). NLP with rheumatoid arthritis is a rare variant of panniculitis in patients with rheumatoid arthritis. The four cases so far reported (1–4) were all middle-aged women with long-standing rheumatoid arthritis. Cutaneous lesions suddenly appeared in the form of painful subcutaneous erythematous nodules on the posterior aspect of the lower legs. All four patients developed ulceration with discharge of purulent materials.

Histopathologic examination of the lesions showed a mostly lobular panniculitis, severe necrosis of the adipocytes in the fat lobule and an inflammatory infiltrate composed of neutrophils, foamy histiocytes and multinucleate giant cells. Small cystic spaces lined by amorphous eosinophilic material were seen in some cases as an early expression of lipomembranous or membranocystic panniculitis (6).

NLP should be differentiated from the suppurative variant of erythema nodosum in which numerous neutrophils extend into the lobule from fibrous septa. Our case was clearly different in that neutrophils infiltrated central lobules of the subcutaneous tissue rather than extending into the lobules from fibrous septa.

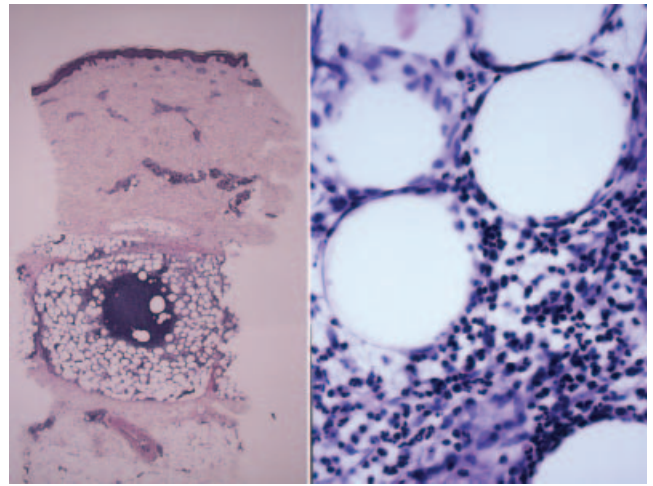


Fig. 2. Histologically, small nodules in central fatty lobules are seen (left). At higher magnification the lobules are composed of numerous neutrophils (right).

All four cases reported in the literature were complicated by rheumatoid arthritis with positive serum rheumatoid factor. However, no abnormality that positively suggested rheumatoid arthritis had been detected in the patient described in this report by routine clinical examinations, including knee joint roentgenograph and serum rheumatoid factor. Thus, we could not make a clear diagnosis of rheumatoid arthritis for this patient. However, the patient had also suffered from arthritis, which had been resistant to treatment for 10 years, and pathological examination of the skin lesion suggested the involvement of neutrophilic disorders, which might be associated with rheumatoid arthritis (5).

This study suggests that NLP should be considered as one of the skin disorders that accompany arthritis, regardless of disease severity observed by serological or roentgenological examinations.

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