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CASE REPORT

Sclerosingpanniculitis: The Significance of Confirming Venous Insufficiency Through Ultrasonography

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ABSTRACT

Sclerosingpanniculitis is a chronic fibrosing process by inflammation of the subcutaneous fat, and indurated, inflamed plaques on the lower extremities. There current standard lacks specific therapeutic guideline for treating sclerosingpanninculitis while variable efficacy of treatment options has been reported. The disease has been associated with other venous abnormalities, such as chronic venous insufficiency, that have been postulated to be involved in its pathogenesis. Herein, we present a case that underlines the significance evaluating venous insufficiency and states the critical relationship of venous insufficiency in consideringa proper treatment plan.

Case Report

Sclerosingpanniculitis is described as chronic fibrosingpanniculitis associated with venous insufficiency [1]. Its typical presentation is characterized by bilateral distribution of indurated plaques on the lower extremities that may give an "inverted champagne bottle" appearance [2]. Although sclerosingpanniculitis is often diagnosed on a clinical basis, microscopic examination further supplemented with imaging modalities helps scrutinize the condition of the disease progress.

A 48-year-old woman presented with erythematous plaques and painful nodules on the medial sides of both her lower legs with mild edema. The lesion had spread for the past 6 months, and the pitting edema was more severe on the right leg and had progressed with weight gain (Figure 1A). Physical examination revealed no evidence of varicosity of the legs. Laboratory results of complete blood count, biochemistry, and urinalysis were all within the normal ranges, including antinuclear antibodies, antineutrophil cytoplasm antibodies, and other rheumatologic screening studies. Biopsy revealed vascular proliferation and fibrosis in the upper dermis (Figure 2A). Massive infiltration of neutrophils and lymphocytes in subcutaneous tissue with fibrotic and mild necrotic changes were observed (Figure 2B, 2C). The patient was given oral steroids, colchicine, and antihistamine for 2 months. However, both the skin lesion and edema had aggravated (Figure 1B). Venous insufficiency was evaluated, and reflux flow of the right superficial saphenous veins was confirmed by using deep venous thrombosis sonography (Figure 2D). Considering the venous insufficiency, obesity, and global sclerotic change with

panniculitis, the patient was diagnosed as having sclerosingpanniculitis and was advised to correct the venous insufficiency by wearing compression stockings and limiting long-standing hours. After 1 month of treatment, the patient showed improved skin lesions with controllable pain and edema (Figure 1C). The patient showed successful pain control and well-maintained skin lesions at the latest follow-up.

Sclerosingpanniculitis is often difficult to differentiate from other forms of panniculitis. Although biopsy usually confirms the diagnosis, histopathological findings alone may be insufficient, as Choonhakan et al proposed three different stages that characterize progression of histological changes [3]. Ultrasonography refines visual evaluation of skin lesions in the extremities with venous disorders that may not be revealed through clinical

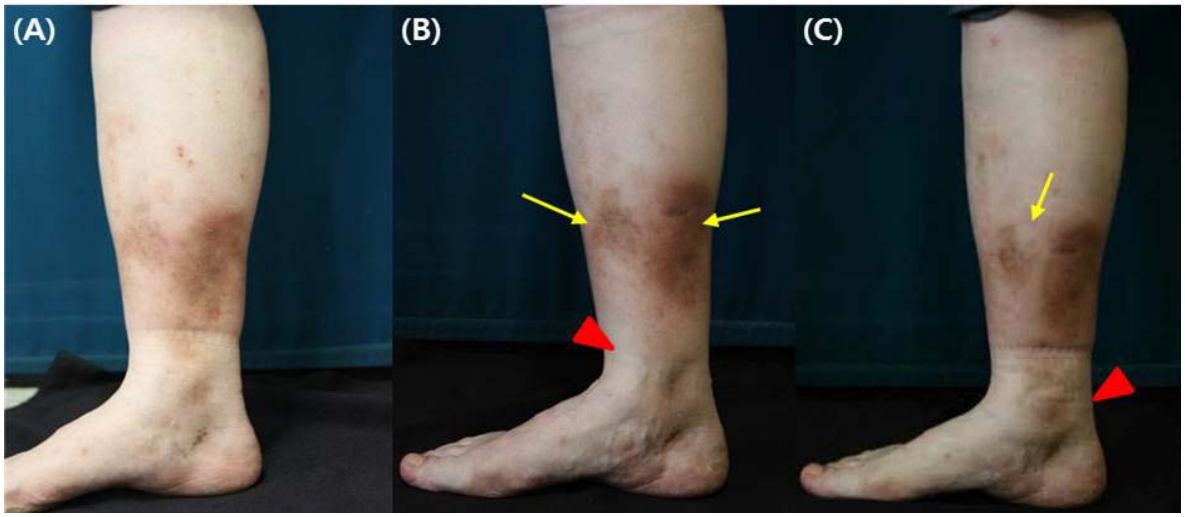

Figure 1: (A)Clinical picture on first visit shows erythematous plaques and nodules with pitting nature edema on right leg. (B) Aggravation of skin lesion (yellow arrows) and edema (red arrow head) after prescribed oral medications. (C) Improved skin lesion after one month of compressive stockings and limiting long standing hours, improved erythema (yellow arrows) and edema (red arrow head) is observed.

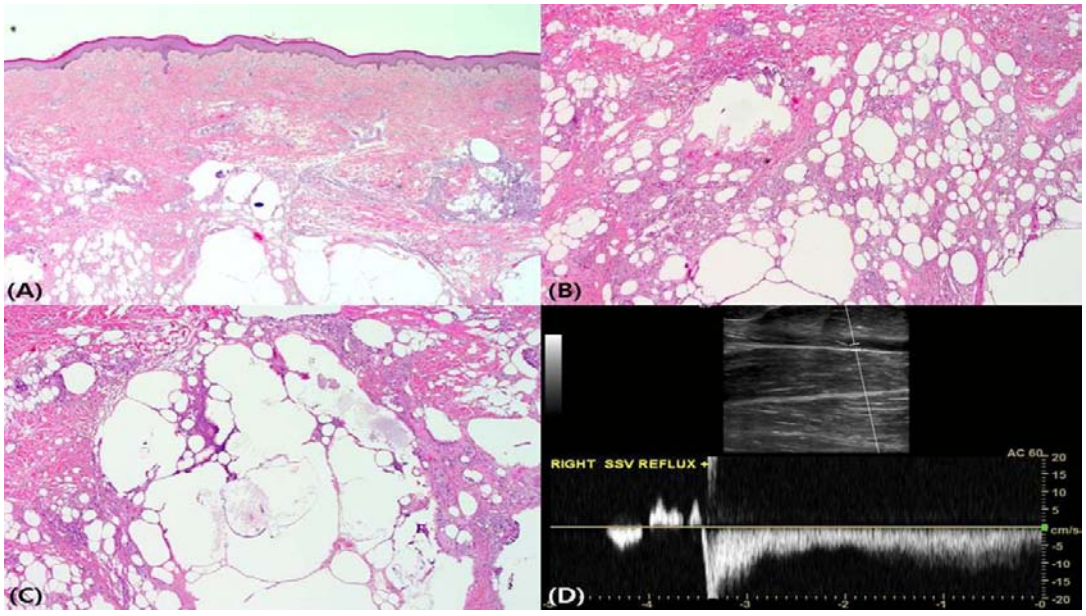

Figure 2: (A) Histopathology revealedvascular proliferation and with fibrosis in upper dermis (H&E Scanning). (B) Infiltration of neutrophils and lymphocytes on subcutaneous tissue with fibrotic and mild necrotic changes are observed (H&E 40). (C) Lipomembranous necrosis within congregated fat lobutes (H&E 400). (D) Venous sonography shows reflux level at left superficial saphenous vein.

examination and histopathological findings [4]. In addition, clinical relevance has also been reported through ultrasonography, suggesting that skin and subcutaneous strains were harder in advanced stages of lipodermatosclerosis [5]. Painful erythematous nodules with edema raised the suspicion of venous insufficiency in our patient, who was obese and stood long hours at work. The patient was confirmed as having venous flow impairment through sonography. Subsequent treatment to correct venous insufficiency resulted in clinical improvements as opposed to the ineffective oral medication previously administered. No published literature stresses the importance of ultrasonography in relation to diagnosis and treatment of sclerosingpanniculitis in the Korean dermatology literature. This case highlights the importance of considering different aspects of panniculitis based not only on clinical and histological grounds but also on further evaluation using various modalities for possible venous insufficiency.

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