



STASIS DERMATITIS

Introduction

Stasis dermatitis is a common inflammatory skin disease that occurs on the lower extremities in patients with chronic venous insufficiency with venous hypertension. The condition typically affects middle-aged and elderly patients. It rarely occurs before the fifth decade of life, except in patients with acquired venous insufficiency due to surgery, trauma, or thrombosis. Stasis dermatitis is usually the earliest cutaneous sequela of venous insufficiency, and it may be a precursor to more problematic conditions such as leg ulcers.

Pathophysiology

Stasis dermatitis occurs as a direct consequence of venous insufficiency. Disturbed function of the 1-way valvular system in the deep venous plexus of the legs results in backflow of blood from the deep venous system to the superficial venous system, with accompanying venous hypertension. This loss of valvular function can result from an age-related decrease in valve competency. Alternatively, specific events, such as deep venous thrombosis, surgery (eg, vein stripping, harvesting of saphenous veins for coronary bypass), or traumatic injury, can severely damage the function of the lower-extremity venous system.

Frequency

Studies have estimated the prevalence of stasis dermatitis to be approximately 6-7% in patients older than 50 years.

A slight female preponderance has been reported in stasis dermatitis. This is most likely due to the fact that pregnancy results in significant stress on the lower-extremity venous system, with many women experiencing earlier and more severe derangement of lower extremity valvular function.

The risk of developing stasis dermatitis steadily increases with each passing decade; when considering only adults older than 70 years, the prevalence of stasis dermatitis may be greater than 20%. The well-publicized aging of the population will undoubtedly result in a significant increase in cases of stasis dermatitis over the next few decades.

History

Patients with stasis dermatitis typically present with an insidious onset of pruritus affecting one or both lower extremities. Reddish-brown skin discoloration is an early sign of stasis dermatitis and may precede the onset of symptoms. The medial (inside aspect of) ankle is most frequently involved, with symptoms progressing to involve the foot and/or calf. The patient may offer a prior history of dependent leg edema/swelling.

Physical

Physical examination reveals erythematous, scaling, eczematous patches affecting the lower extremity. The medial ankle is most frequently and severely involved because of the fact that the medial ankle represents a watershed area with relatively poor blood flow compared with the rest of the leg. In advanced cases of stasis dermatitis, the inflammation may encircle the ankle and extend to just below the knee; this is sometimes referred to as stocking erythroderma. The dorsal part of the foot may be involved in severe cases. Involved skin in stasis dermatitis may exhibit the same changes as seen in other eczematous conditions.

Severe, acute inflammation may result in exudative, weeping patches and plaques. Secondary infection can cause typical honey-colored crusting due to bacteria or monomorphous pustules due to cutaneous candidiasis.

In long-standing lesions, lichenification and hyperpigmentation may occur as a consequence of chronic scratching and rubbing. In addition to lichenification and hyperpigmentation, chronic stasis dermatitis can show changes, such as skin induration, which may progress to lipodermatosclerosis with the classic inverted champagne bottle appearance. Another unique feature sometimes seen in chronic stasis dermatitis is the development of violaceous plaques and nodules on the legs and dorsal part of the feet. These lesions frequently undergo painful ulceration.

Stasis dermatitis frequently occurs along with a background of skin changes that are typical for patients with venous insufficiency. These skin changes include edema, varicosities, hyperpigmentation, atrophic patches (atrophie blanche), and diffuse red-brown discoloration representing deep dermal deposits of hemosiderin (from degraded, extravasated erythrocytes). These chronic changes persist regardless of the activity of stasis dermatitis.

Treatment

Compression therapy

The overall mainstay of treatment has always been aimed at lessening the clinical impact of the underlying venous insufficiency, which is typically accomplished with compression therapy. Compression is generally accomplished by means of specialized stockings that deliver a controlled gradient of pressure (measured in mm Hg) to the affected leg. Usually knee-high, 20-30 mmHg compression hose are recommended. More aggressive compression can be performed by using compression (Unna) boots and more sophisticated devices such as

end-diastolic compression boots or a lymphapress machine. Most of these modalities require administration in a physician's office or wound care center.

Frequent leg elevation is a necessary adjunct to leg compression.

Exercise - muscle movement helps move the circulation.

Topical therapy

Topical treatment of stasis dermatitis has much in common with the treatment of other forms of acute eczematous dermatitis. Weeping lesions can be treated with wet-to-damp gauze dressings soaked with water or with a drying agent, such as aluminum acetate. Topical corticosteroids are frequently used for reducing inflammation and itching in acute flares; mid-potency corticosteroids, such as Triamcinolone 0.1% ointment, are generally effective.

Be wary of the use of high-potency topical corticosteroids in stasis dermatitis because the chronically inflamed skin can increase the risk of systemic absorption and because steroid-induced cutaneous atrophy can predispose the patient to ulceration. Furthermore, prolonged use of topical steroids can lead to decreased efficacy of the steroid, a phenomenon known as tachyphylaxis. Systemic corticosteroids are not part of stasis dermatitis treatment, although they may be required in very severe cases of widespread autoeczematization.

The recently approved nonsteroidal calcineurin inhibitors tacrolimus and pimecrolimus may prove to be useful tools in the management of stasis dermatitis. Although these topical medications are approved only for atopic dermatitis, they have been shown to be effective in many steroid-responsive dermatoses. Because the calcineurin inhibitors do not carry the risks of skin atrophy or tachyphylaxis, they have the potential to become valuable agents in the treatment of chronic dermatoses such as stasis dermatitis.

Prevention/management of infection

Be wary of infection in stasis dermatitis; this becomes more problematic when using topical corticosteroids, which make the patient more susceptible to infection.

Open excoriations and erosions should be treated with a topical antibiotic, such as Polysporin. Obvious superficial impetiginization should be treated with topical mupirocin or a systemic antibiotic with activity against Staphylococcus and Streptococcus species (eg, dicloxacillin, cephalexin, cefadroxil, levofloxacin).

Culture with sensitivity testing is important when managing suspected superinfection because community-acquired methicillin resistance is becoming increasingly prevalent.

Complications of treatment – Allergic contact dermatitis

The development of contact dermatitis is especially problematic in the treatment of patients with stasis dermatitis. Chronic inflammation of the skin, coupled with the use of multiple topical medications (both prescription and over-the-counter) frequently result in contact sensitization as a complication of stasis dermatitis. Patients should be instructed to not apply over-the-counter antibiotics or other topical agents without the direction of a physician.

Some of the most frequent contact allergens complicating stasis dermatitis include the topical antibiotics neomycin and bacitracin. In addition, affected patients may become sensitized to rubber products that are found in some wraps and stocking. Topical corticosteroid allergy, while uncommon, is a condition that can worsen stasis dermatitis despite seemingly appropriate prescription therapy.

Long-term management

Plain white petrolatum is an inexpensive occlusive moisturizer that is very effective and, importantly, does not contain any contact sensitizers.