

CORRESPONDENCE

Incompetent saphenous vein in patients with lower leg dermatitis and cramps

Chronic venous insufficiency is thought to be caused by the dysfunction of valves of the superficial, deep, and/or communicating veins due to congenital or acquired incompetence, deep venous outflow obstruction or muscle dysfunction, and calf muscle pump failure.¹⁻³ Superficial venous disease is classified by anatomic location (great saphenous vein or small saphenous vein).⁴

We recruited lower leg dermatitis patients at our department between 2018 and 2021. Color Doppler duplex ultrasound was performed in order to confirm the diagnosis of incompetent great saphenous vein and/or small saphenous vein, and to rule out deep vein thrombosis in the lower extremities. We confirmed any history of diabetes mellitus, hypertension, hospitalization with leg ulcers, or symptoms suggestive of phlebotic syndrome (chest hemoptysis or dyspnea) from each patient. No abnormality was noted in the laboratory investigations, renal and liver function tests, urinalysis, or blood sugar levels.

The patients comprised 22 men and 8 women with a mean age of 71.8 ± 11.0 years. Nummular dermatitis was found in 13 (43.3%) patients, stasis dermatitis in 12 (40.0%), and asteatotic dermatitis in 6 (20.0%). All patients felt itching. The prevalence of cramps, swelling, and aching pains was reported by 25 (83.3%) patients. Leg cramps were the most frequent symptom (19/30, 63.3%), followed by swelling (10/30, 33.3%) and aching (6/30, 20.0%). We found incompetent great saphenous vein and/or small saphenous vein in 8 (26.7%) of the patients.

The patients were divided into two groups, those with incompetent great saphenous vein and/or small saphenous vein (Group 1; $n = 8$) and those without (Group 2; $n = 22$). The clinical findings of Group 1 patients are listed in Table 1. The prevalence of cramps and/or aching in Group 1 patients was significantly higher than that in Group 2 patients ($p = .048$). Leg cramps were found all but one patient in Group 1. In contrast, swelling was found in 9 patients in Group 2, but in only one patient in Group 1.

Besides itching, leg cramps were the most frequent symptom among the leg dermatitis patients in the present study. We found incompetent great saphenous vein and/or small saphenous vein in 8 (26.7%) of the 30 patients with lower leg dermatitis based on ultrasound studies. In addition, all but one of the 8 Group 1 patients reported leg cramps. The one patient had aching pain. A study of a large employed population found swelling and nocturnal cramps to be the most common symptoms of small cutaneous vein incompetency.⁵ Patients with small cutaneous veins generally complained about more leg symptoms, of which leg swelling and muscle cramps during the night were the most frequent.⁵ We found mainly cramps in Group 1 and swelling in Group 2. We propose that symptoms of cramps in addition to itching might be good predictors of superficial venous insufficiency in leg dermatitis. Leg dermatitis could also be occurred if there are incompetent perforating veins. These symptoms may be useful in clinical

TABLE 1 Clinical finding of Group 1 patients with incompetent great saphenous vein and/or small saphenous vein

Case	Age	Gender	Leg dermatitis	Symptom except itching	Incompetent saphenous vein
1	85	Male	Nummular dermatitis	Aching	Right great saphenous vein
5	73	Male	Nummular dermatitis	Cramps	Left great saphenous vein
6	62	Male	Nummular dermatitis	Cramps	Left great saphenous vein
9	81	Female	Stasis dermatitis	Cramps	Right great saphenous vein
11	87	Female	Nummular dermatitis	Cramps, Aching	Right and left great saphenous veins, left small saphenous vein
20	59	Male	Asteatotic dermatitis	Cramps	Right small saphenous vein
23	74	Male	Nummular dermatitis, asteatotic dermatitis	Cramps	Left small saphenous vein
32	65	Female	Stasis dermatitis	Swelling, Aching	Right and left great saphenous veins

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assessment and may be helpful in early detection of cutaneous venous disease.

DECLARATION SECTION


Approval of the research protocol: The study was approved by the ethics committee of Tohoku Medical and Pharmaceutical University. Informed Consent: Written informed consent was obtained from all patients.

Registry and the Registration No. of the study/trial: N/A.

Animal Studies: N/A.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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