

Phlebolymphe­dema is the ultimate comorbidity/ outcome of lymphedema



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Drs Son, O'Donnell, and colleagues from Tufts Medical Center in Boston have given us a timely report on the crucial role of the "combined" condition of chronic venous and lymphatic insufficiency, defined as phlebolymphe­dema, and its impact on venous leg ulcers.¹ Based on a unique, mutually interdependent venous-lymphatic system, which has an inseparable outflow system, its physiologic drainage functions are interdependent.

The lymphatic system is responsible for the transport of interstitial fluid drainage but not by the venous capillary reabsorption. The lymphatics play a major role in any kind of edema.²⁻⁵ Each of the two systems can also play an auxiliary role in the fluid return for other systems to compensate for fluid overload, but they are only "mutually complementary" when there are sufficient compensatory reserves. When one of the two systems fails (eg, chronic venous hypertension or lymphedema), such a mutual interdependence often causes overloading of the other system, resulting in failure of the dual system. Hence, when chronic venous insufficiency causes failure of the venous system drainage, it will often lead to a two-system failure, defined as combined chronic venous and lymphatic insufficiency, or phlebolymphe­dema.²⁻⁵ Phlebolymphe­dema therefore represents a combined condition of chronic venous and lymphatic insufficiency, with variable clinical manifestations ranging from Clinical, Etiology, Anatomy, and Pathophysiology class 3 to class 6 disease, depending on the extent of the insufficiencies in each system.

Primary phlebolymphe­dema is occasionally caused by congenital vascular malformations, such as deep vein dysplasia with venous reflux and venous hypertension, as well as by a lymphatic malformation, such as aplasia or hypoplasia that causes chronic lymphatic insufficiency. However, the majority of phlebolymphe­dema is a "secondary" condition, with chronic venous insufficiency due to sequelae of the post-thrombotic syndrome

combined with chronic lymphatic insufficiency due to local tissue damage creating regional lymphedema. Damage to lymphatics has been demonstrated in venous leg ulcers, and the secretions from venous ulcers have been identified as lymph fluid. Lymphatic involvement can be demonstrated in both patients with venous skin changes and those with post-thrombotic syndrome.²⁻⁶

This unintentionally ignored, inseparable venous-lymphatic disease of venous leg ulcers deserves further study to build on the work of these authors and to further elucidate its contribution to phlebolymphe­dema to improve management of this complex and disabling disease of the venous and lymphatic systems.

The opinions or views expressed in this commentary are those of the author and do not necessarily reflect the opinions or recommendations of the Journal of Vascular Surgery: Venous and Lymphatic Disorders or the Society for Vascular Surgery.

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