

**VASA VASORUM OF SUPERFICIAL COLLECTING
LYMPHATICS OF HUMAN THIGH****M. Aglianò, G. Sacchi, E. Weber, A.M. Pucci, L. Comparini**

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ABSTRACT

Collecting lymphatics were obtained from human thigh fat for light microscopy and tridimensional reconstruction at time of operation for varicose veins. No patient had lymphedema and routine sections showed no inflammation or notable pathologic alteration of the surrounding soft tissue. Abundant vasa vasorum was observed around the musculature of superficial collecting lymphatics of human thigh. Within intervalvular portions of the lymphatic collectors where the muscle coat was thicker and more compact, the vasa vasorum penetrated between smooth muscle cells and was in contact with the endothelium. In valvular portions of the collecting lymphatics where the muscle layer was thinner and more fragmented, there were fewer vasa vasorum. Tri-dimensional reconstructions of the collecting lymphatic wall showed two communicating plexi of vasa vasorum—one outside and the other inside the muscle layer. Arteries and veins of similar size did not have such an abundant vasa vasorum. The explanation for this difference may relate to the fact that a relatively low oxygen and nutrient content of lymph is insufficient to nourish the collecting lymphatic. Moreover, diffusion of nutrients from the external plexus is likely also impeded by the thickness and density of the muscle layer. The vasa vasorum deep in the muscular layer and in the subendothelial space probably sustain adequate nutrition and oxygenation to the collecting lymphatic.