

**AN IMMUNOLOGICAL CORRELATION BETWEEN THE
ANCHORING FILAMENTS OF INITIAL LYMPH VESSELS
AND THE NEIGHBORING ELASTIC FIBERS: A UNIFIED
MORPHOFUNCTIONAL CONCEPT**

R. Solito, C. Alessandrini, M. Fruschelli, A.M. Pucci, R. Gerli

Institute of Histology and General Embryology, University of Siena, Italy

ABSTRACT

Little has been published on the histochemical and cytochemical properties of anchoring filaments of initial lymph vessels. Previous research suggests that the microfibrils of the anchoring filaments have ultrastructural, histochemical and cytochemical characteristics similar to those of the microfibrils associated with elastic fibers. With the aim of further investigating the histological identity of anchoring filaments, we performed an immunohistochemical study with human skin lymphatics, using antibody HB8, specific for elastic fiber microfibrils. The findings suggested strong molecular similarities between elastic fibers and the fibrils of anchoring filaments of the initial lymph vessels. A comparison of these fibrils showed both constitutional homogeneity and structural continuity from the abluminal surface of the initial lymph vessel to the perivascular elastic fibers and to the adjacent elastic network of connective tissue. In conjunction with previous findings, we propose a unified hypothesis that the elastic fiber system composed of anchoring filaments, perilymphatic sheath and adjacent connective tissue acts by alternating stretching and relaxation to propel lymph towards lymph collectors and draining lymph nodes.