
Serum level of VEGF-D in patients with primary lymphedema.

Department of Dermatology, Wilhelminenspital, Vienna, Austria. astrid.fink@wienkav.at

Recent studies have indicated that vascular endothelial growth factor-D (VEGF-D) stimulates lymphangiogenesis in humans. Furthermore, mutations of vascular endothelial growth factor receptor 3 (VEGFR-3) have been observed in families with hereditary lymphedema. The lack of stimulation of lymphangiogenesis could lead to production of even more VEGF-D to obtain stimulation of lymphangiogenesis resulting in a high serum level of VEGF-D. The aim of the present study was to compare the serum level of VEGF-D in patients with primary lymphedema with healthy controls. In a prospective study, the serum level of VEGF-D was determined by a solid phase ELISA in patients with primary lymphedema and compared with healthy controls. In the group of patients with primary lymphedema the serum level of VEGF-D was significantly higher compared with controls (p=0.0047). The increased levels of VEGF-D observed in the present study suggest that primary lymphedema may be based on defective stimulation of VEGFR-3.