Abstract
Initially, the progression of chronic venous insufficiency is related to venous hypertension. The earliest complaints or symptoms, as well as vessel wall deterioration, valve restructuring, and, eventually, varicose veins, result not only from elevation of pressure, but also from a cascade of biochemical events related to both the macro- and the microcirculation. Thickening and remodelling of the venous wall are influenced by two parameters: abnormal shear stress and hypoxia that activate the endothelium first at the level of valve cusps and then in large veins. Hypoxia leads to activation of the endothelium and leukocyte accumulation. By inhibiting endothelial activation, micronized purified flavonoid fraction (MPFF) (Daflon 500 mg), an edemaprotective agent, can prevent the inflammatory cascade resulting from the leukocyte-endothelium interaction. This subsequently delays the appearance of reflux and inhibits the initiation of the vicious circle ending in enhanced venous pressure. This is how Daflon 500 mg relieves patients from symptoms and edema and possibly also prevents the appearance of varicose veins. Rheological disturbances also play a major role in the appearance of these disorders. Furthermore, venous hypertension provokes leakage from the vessels and capillaries exhibiting increased permeability, leading to increases in hydrostatic load, and overloading of the lymphatic network, which subsequently results fluid exudation causing edema. Microcirculatory dysfunction leads to capillary damage, skin changes and venous leg ulcers. The clinical efficacy of Daflon 500 mg in venous leg ulcers has been demonstrated by several randomised controlled studies, in which the rate of ulcer healing was significantly shortened. An explanation for the ability to speed ulcer healing comes from the protection Daflon 500 mg exerts on the microcirculation.