

Method for examining neovascularization of carotid artery atherosclerotic plaque after endarterectomy comprises collecting tissue fragments, fixing thereof, preparing specimens and microscopic examination. A two-fragment tissue collection and sorting thereof are performed: a first fragment with a volume of about 2 mm³ is sampled for electron microscopic examination, fixed in a 4% glutaraldehyde solution, epoxy blocks are prepared from which semi-thin and ultra-thin sections are cut for high-resolution analysis of cellular components of newly formed vessel endothelium, and a second fragment of arbitrary size is sampled for light microscopy, fixed in a 10% formalin solution. Then, decalcification is performed, paraffin blocks and sections are prepared, routine hematoxylin-eosin staining is carried out for preliminary examination of newly formed vessels and possible intra-plaque hemorrhages, subsequently stained with dyes for evaluating a duration of the hemorrhage, and immunohistochemical labeling of the endothelium is conducted for evaluating microvessel maturity.