

Morphological investigations of connective tissue structures in the region of the nervus occipitalis major.

Abele H, Pieper KS, Herrmann M.
Department of Anatomy, University of Ulm, Germany.

Abstract

The connective tissue lamellae surrounding the n. occipitalis major are arranged in such a way that they form at least two compartments. An outer epineurial, and an inner endoneurial one. The outer compartment is a shifting and sliding layer, the inner one is probably filled with fluid which means that it is relatively incompressible. This fluid could be drawn off and supplied through the widely branched arterial and venous reticulum, the vasa nervorum. Measurements of the connective tissue space area (perineurium, subperineurial space, endoneurium with axon and glia) on the n. occipitalis major showed a high correlation between measured values. In addition, lamellar corpuscles of the Paccini type are regularly found in both compartments. These receptors measure the local pressure and shearing forces. The design of the suspension network along with the course of the muscles in the area of the regio occipitalis, the interdependence of the connective tissue compartments, the diffusion barrier of the perineurium, the mighty vasa nervorum and the occurrence of lamellar corpuscles, all point to a probable connection with the symptom complex of occipital neuralgia.

PMID: 10568219 [PubMed - indexed for MEDLINE]