

Micro and macroscopic analysis of the geniculate ganglion of the facial nerve

Šućro Madžgalj^a, Branko Popadić^b

^aUniversity of Belgrade, School of Medicine, Department for Anatomy, Department for Histology

^bUniversity of Podgorica, Medical Faculty

Šućro Madžgalj 0000-0002-7000-5697, Branko Popadić 0000-0002-1311-2592

Key words: facial nerve, geniculate ganglion, petrosal artery, clinical target

Potential clinical ambitions that are essentially based on the results of this paper, in principle, by determining the periganglionic and intraganglionic vascular network and the clinical significance of vascularisation of geniculate ganglion in terms of possible performing more secure microsurgical procedures is the goal of this study. Blood vessels of fourteen temporal bones were studied by stereo microscopy after injecting with a mixture of India ink and gelatine in the arterial system. In addition, the histological preparations of the geniculate ganglion were painted trichromatically by Masson for the analysis of the intraganglionic vascular network. The geniculate ganglion was supplied by a petrosal artery, singular in all the specimens, except in one, where there were two of them. The mentioned originated from the middle meningeal artery (a. meningea media). A.petrosa averaged 17.1 mm in length. From this artery branched out approximately 1.6 branches intended for periganglionic arterial network, whose average diameter was 0.029 mm. Microscopic section fields of the ganglion slides contained an average 99.8 microvessels. The observed characteristics of the geniculate ganglion vasculature, could be the useful base for decompressive neurovascular surgery and provides the basis for further examination of the geniculate ganglion from both the scientific and clinical aspect.