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O-018 - THE TRANSORBITAL APPROACH FOR ANTERIOR CIRCULATION VASCULAR TARGETS

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Resumen

Introduction: Minimally invasive approaches in cranial base surgery have been developed in the last decades. The eyelid transorbital route is one of these approaches and its adequacy for the treatment of intracerebral vascular pathology remains unclear.

Objectives: The aim of the present work is to make a qualitative description of the endoscopic transorbital approach for vascular lesions in the internal carotid artery (ICA) and the middle cerebral artery (MCA).

Methods: Five embalmed adult cadaveric specimens (10 orbits) were used in the study. Each orbit was approached in three successive steps: 1) Transorbital approach without anterior clinoid process (ACP) removal; 2) Removal of ACP; 3) Removal of the lateral orbital rim. All the procedures were performed under endoscopic view, although subarachnoid dissection was also performed using the microscope in half of the orbits.

Results: The transorbital approach without removing the ACP allows to dissection of the sphenoidal and lateral part of the Sylvian fissure with an adequate identification of the MCA bifurcation in all specimens. The removal of the ACP allows to achieve further dissection of the opto-carotid cistern, with the identification of the ophthalmic, posterior communicating and the anterior choroidal arteries. The ICA bifurcation and A1 segment were also easily identified. Finally, the removal of the lateral orbital rim was associated with an easier access to the above-mentioned vascular structures. The microscope was easily used for dural opening and subarachnoid dissection in half of the orbits.

Conclusions: The eyelid transorbital approach may allow to reach the main vascular structures of anterior circulation and it might be considered as a potential approach for the treatment of vascular pathology (mainly aneurysms) at this level.