

# INTRAOPERATIVE VISUAL EVOKED POTENTIALS FOR OPHTHALMIC ARTERY ANEURYSMS AS A PREDICTOR OF VISUAL FUNCTION.

Malli A.<sup>1</sup>, Papakonstantinou K.<sup>1</sup>, Georgis P-A.<sup>1</sup>, Paidakakos N.<sup>1</sup>, Georgoulis G.<sup>1</sup>, Georgakoulis N.<sup>1</sup>

<sup>1</sup>Neurosurgical Department, General Hospital "Georgios Gennimatas", Athens, Greece

**Objective:** Intraoperative visual evoked potential (VEP) monitoring has become increasingly implemented in ophthalmic artery aneurysm surgery and represents a useful tool for visual assessment. It is generally reported that ophthalmic artery occlusion during clipping and/or surgical manipulation of the vessel does not necessarily result in visual impairment due to its collateral supply from external carotid artery branches, but caution should be taken due to its possible catastrophic implications in visual function.

**Methods:** In this retrospective study, we report our initial experience in VEP monitoring retrieved from 20 patients who underwent surgical clipping for ophthalmic artery aneurysms. We evaluated visual evoked potentials in different timepoints with emphasis during temporary clipping, manipulation of optic nerve-ophthalmic artery complex and permanent clipping.

**Results:** Of 11 patients with intraoperative VEP deterioration (decrease at least 50% of amplitude of VEPs waves) and subsequent neurophysiological recovery upon changing the surgical maneuver, 5 patients improved, 4 exhibited no change from their preoperative status and 2 presented with postoperative visual deterioration.

**Conclusions:** VEP monitoring appear to be a useful tool in aneurysm surgery, since most patients benefited from action taken in view of the neurophysiological alerts. A larger patient sample is currently been studied.

