Pituitary tumor case series

A study included 197 eyes of 197 patients with chiasmal compression due to pituitary tumors. No patient showed complete visual field (VF) recovery in group 1 with a preoperative peripapillary retinal nerve fiber layer (pRNFL) thickness <65 µm or a ganglion cell-inner plexiform layer (GCIPL) thickness <55 µm regardless of age. These groups showed the worst VF outcome (pRNFL, p = 0.0001; GCIPL, p < 0.0001). However, a significant recovery in VF (greater than 2 dB) was observed in 45% of group 1 patients based on pRNFL thickness and in 61.54% of group 1 patients according to GCIPL thickness. In groups 2 and 3 with a preoperative pRNFL thickness of 65 µm or more and a GCIPL thickness of 55 µm or more, the rate of complete VF recovery decreased as subjects' ages increased. Group 3 with a preoperative pRNFL thickness of 85 µm or more and a GCIPL thickness of 77 µm or more were 2.5-fold and 4.0-fold more likely to completely recover VF, respectively, compared with group 2.

Stratified preoperative peripapillary retinal nerve fiber layer (pRNFL) and ganglion cell-inner plexiform layer (GCIPL) thicknesses measured via optical coherence tomography (OCT) in different age categories are effective biomarkers for predicting visual functional outcomes [1].

1)
Lee GI, Park KA, Lee D, Oh SY, Kong DS, Hong SD. Predicting visual outcomes after decompression of pituitary tumours based on stratified inner-retinal layer thickness and age. Acta Ophthalmol. 2022 Nov 18. doi: 10.1111/aos.15281. Epub ahead of print. PMID: 36398459.