PO 20
MYOPIC TRACTION MACULOPATHY – TO TREAT OR NOT TO TREAT

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Introduction and Purpose: Myopic traction maculopathy (MTM) affects 9 – 34% of highly myopic eyes and comprises a wide spectrum of clinical pictures, including maculoschisis, macular detachment, lamellar (LMH) or full-thickness macular holes (FTMH). It is a complex disease that develops due to a complex of traction forces resulting from anterior traction, intrinsic rigidity of the internal limiting membrane (ILM) and progression of posterior staphyloma. Previous studies on the natural course of the disease have acknowledged that while some eyes gradually progress to more severe stages of disease, others may remain stable for many years or even experience spontaneous resolution. The purpose of our study is to evaluate the anatomical and functional results of highly myopic eyes with MTM submitted to vitreoretinal surgery.

Methods: Retrospective case-control study including eyes with MTM submitted to pars plana vitrectomy with ILM peeling or inverted ILM flap technique and a control group of highly myopic unoperated eyes. High myopia was defined as a spherical equivalent (SE) ≤ –6.0 D or an axial length (AL) > 26.5mm[1]. Each case was classified according to the MTM Staging System (MSS)[2].

Results and Discussion: Twenty-five vitrectomized eyes (24 patients) and 26 controls (24 patients) were included in the study, with a mean follow-up time of 24.25±17.77 and 50.76±34.46 months, respectively. In the surgery group, 16 (64.0%) eyes were classified as stage 1, six (24.0%) as stage 2 and three (12.0%) as stage 3. Eight (32.0%) eyes presented with a LMH and 10 (40.0%) with a FTMH. Combined phacovitrectomy was performed in two thirds of the cases. The initial best-corrected visual acuity (BCVA) was significatively different between groups (p<0.001). An improvement from 1.03±0.59 to 0.79±0.70 logMAR was observed after surgery in the treatment group, as well as an anatomical resolution of the macular pathologic features on OCT in the majority of cases (79.17%). BCVA remained stable or decreased in eight (32.0%) operated eyes. Even though the control group showed an overall decline from 0.24±0.50 to 0.29±0.55 logMAR during the follow-up period, an anatomic improvement was observed in two nontreated eyes. There was a statistically significative difference in the BCVA variation between groups (p<0.05). Different MTM stages did not influence final functional outcomes in the surgery group.

Conclusions: The natural course of MTM is dynamic and highly variable and therefore its management remains controversial. Surgical repair of MTM can be successful both anatomically and functionally when the major traction mechanism is relieved, but the final visual benefits are still limited in some cases. The decision to intervene should be carefully determined based on the patient's BCVA and on a detailed evaluation of the foveal pathologic features and its progression throughout time.

[1]Friedman NJ, Kaiser PK. Essentials of Ophthalmology. Philadelphia, PA: Elsevier Inc; 2007:253-254
[2]Parolini B, Palmieri M, Finzi A, et al. The new Myopic Traction Maculopathy Staging System. *Eur J Ophthalmol*. 2021;31(3):1299-1312. doi:10.1177/1120672120930590