Outcomes of new peeling technique for macular pucker

Xhevat Lumi MD, PhD

Ljubljana, Slovenia

Purpose: Macular pucker (MP) represents late, opaque form of epiretinal membrane (ERM), having distortion of the inner retina and reduced visual acuity. The management consist of either observation or surgical intervention. The modern surgical approach for treating MP consists of sutureless transconjunctival three-port (23-, 25-, or 27- gauge) pars plana vitrectomy (PPV) and peeling of the ERM and/or Internal Limiting Membrane. As an alternative has been reported a newer technique which uses only vitreous cutter for membrane peeling. We are reporting the effectiveness and compare anatomic and functional results of surgery for MP peel by two different surgical techniques.

Methods: A total of 40 eyes of 40 patients with MP were prospectively studied. The eyes were divided into two groups: 18 cases included in the first group underwent 25-gauge PPV with membrane peeling by using microforceps, whereas in 22 cases of the second group the peeling was performed by using only vitreous cutter.
Surgical outcomes were analyzed, regarding best-corrected visual acuity (BCVA) measured on Snellen charts and central retinal thickness (CRT) measured by spectral domain optical coherence tomography.

Results: MP peel was achieved in all cases. Patients were followed for at least 6 months. BCVA improved from mean preoperative 0.37 (range: 0.16-0.6) to postoperative 0.59 (range: 0.2-1.0) in first group, and from 0.29 (range: 0.1-0.5) to 0.63 (range: 0.2-1.0) in the second group. Mean preoperative CRT reduced from 457.3 μm (range: 352-606 μm) to 376,8 μm (range: 253-474) and from 488.3 μm (range: 393-613) to 356.5 μm (range: 283-451) respectively for both groups postoperatively. There were no intra- or postoperative complications in any case.

Conclusion: Both surgical techniques resulted to be effective and safe. It resulted in anatomic and functional improvement in all cases. The technique which uses vitreous cutter only does not require extra instrumentation. With the newest technique it is reduced possibility of retinal iatrogenic injury.