Commentary: Macular buckling with T-shaped buckle for myopic tractional maculopathy with posterior staphyloma

Myopic tractional maculopathy (MTM) encompasses a challenging set of conditions in patients with pathological myopia. Its pathogenesis can be attributed to two main components: anteroposterior and tangential traction. The anteroposterior component is a sum of the vector forces contributed by the inward pull of the posterior hyaloid and the outward pull of the ectatic sclera in the region of the posterior staphyloma. Tangential forces are secondary to the epiretinal membrane and internal limiting membrane contraction. Pars plana vitrectomy (PPV), macular buckling (MB), or a combination of both procedures are the recommended techniques to manage patients with MTM.^[1,2] Susvar *et al.*^[3] reported long-term outcomes of T-shaped MB for MTM in Asian Indian eyes. The authors must be commended for their work on tackling this challenging condition. We would like to highlight the following points, in addition to those mentioned in the aforementioned manuscript.

1. Parolini *et al.*^[1,2] proposed a 12-stage classification of MTM based on the presence or absence of lamellar/full-thickness macular hole (MH), nature of macular schisis (MS), and macular detachment (MD). They outlined a treatment

181

algorithm comprising observation, PPV, MB, or PPV+MB based on the stage of the disease.

- 2. Zhao *et al.*^[4] demonstrated the superiority of MB over PPV in patients of high myopia who have MH-associated MD in a prospective randomized trial. Though the functional outcomes at two years were similar in both groups, patients who underwent MB had a 4% failure rate compared to 25% for those who underwent PPV.
- 3. Liu *et al.*^[5] highlighted that MB had better anatomic and functional outcomes with fewer complications than PPV in patients of high myopia with MS-associated MD in the absence of MH.
- 4. MB has a steep learning curve and may be associated with complications such as optic nerve compression, choroidal/ subretinal hemorrhage, diplopia, and improper exoplant placement. Utilization of intraoperative optical coherence tomography and 3D printing of macular buckles via computerized tomography-guided measurement of the geometry of myopic eyes can potentially lead to improved outcomes while minimizing complications.^[6.7]

Uday Tekchandani, Simar R Singh, Mohit Dogra

Advanced Eye Centre, Post Graduate Institute of Medical Education and Research, Chandigarh, India

Correspondence to: Dr. Mohit Dogra, Advanced Eye Centre, Post Graduate Institute of Medical Education and Research, Chandigarh - 160 012, India. E-mail: mohit_dogra_29@hotmail.com

References

- Parolini B, Palmieri M, Finzi A, Frisina R. Proposal for the management of myopic traction maculopathy based on the new MTM staging system. Eur J Ophthalmol 2020;1120672120980943. doi: 10.1177/1120672120980943.
- Parolini B, Palmieri M, Finzi A, Besozzi G, Frisina R. Myopic traction maculopathy: A new perspective on classification and management. Asia Pac J Ophthalmol 2021;10:49-59.

- 3. Susvar P, Singh N, Bhende P, Rao C. Outcomes of macular buckling with a T-shaped buckle for myopic tractional maculopathies associated with posterior staphyloma: An Indian experience. Indian J Ophthalmol 2022;70:171-9.
- Zhao X, Li Y, Ma W, Lian P, Yu X, Chen S, *et al.* Macular buckling versus vitrectomy on macular hole associated macular detachment in eyes with high myopia: A randomised trial. Br J Ophthalmol 2021;bjophthalmol-2020-317800. doi: 10.1136/ bjophthalmol-2020-317800.
- Liu B, Chen S, Li Y, Lian P, Zhao X, Yu X, *et al.* Comparison of macular buckling and vitrectomy for the treatment of macular schisis and associated macular detachment in high myopia: A randomized clinical trial. Acta Ophthalmol 2020;98:e266-72.
- Alkabes M, Mateo C. Macular buckle technique in myopic traction maculopathy: A 16-year review of the literature and a comparison with vitreous surgery. Graefe Arch Clin Exp Ophthalmol 2018;256:863-77.
- Pappas G, Vidakis N, Petousis M, Maniadi A. Individualized ophthalmic exoplants by means of reverse engineering and 3D printing technologies for treating high myopia complications with macular buckles. Biomimetics 2020;5:54.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

| Access this article online | |
|----------------------------|--|
| Quick Response Code: | Website: |
| | www.ijo.in |
| | DOI: 10.4103/ijo.IJO_2373_21 |
| | |

Cite this article as: Tekchandani U, Singh SR, Dogra M. Commentary: Macular buckling with T-shaped buckle for myopic tractional maculopathy with posterior staphyloma. Indian J Ophthalmol 2022;70:180-1.