



Figure 1

Myopia Support Device  
(Titanium Macular Buckle)

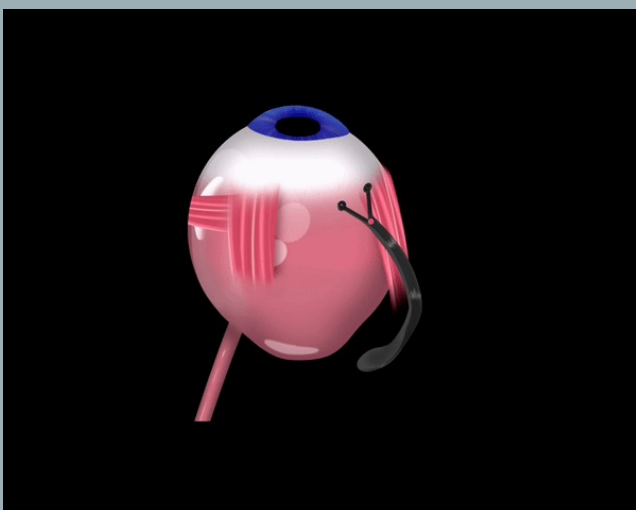
# MYOPIA SUPPORT DEVICE (TITANIUM MACULAR BUCKLE) FOR POSTERIOR POLE RETINAL DETACHMENT WITH OR WITHOUT MYOPIC MACULOSCHISIS



Levent Akduman, MD, FASRS  
akduman@macularbuckle.com

Akduman L<sup>1,2,3</sup>, Ozdek S<sup>4</sup>, Ermis S<sup>5</sup>, Ozdemir-Zeydanli E<sup>6</sup> Artunay O<sup>7</sup>

<sup>1</sup>EyeCare Partners, St. Louis, MO, USA, <sup>2</sup>The Retina Center, St. Louis, MO, USA, <sup>3</sup>Saint Louis University, St. Louis, MO, USA, <sup>4</sup>Gazi University department of Ophthalmology, Ankara, Turkey <sup>5</sup>University of Health sciences, Department of Ophthalmology, Basaksehir City Hospital, Istanbul, Turkey, <sup>6</sup>Ankara Retina Clinic, Ankara, Turkey, <sup>7</sup>University of Health sciences, Department of Ophthalmology Beyoglu Eye Research Hospital, Istanbul, Turkey



**Objective:** This study aims to present two cases of posterior pole retinal detachment in patients with pathologic myopia who underwent myopia support device-assisted repair (see Figure 1).

**Methods:** We present two cases of posterior pole retinal detachment, one of which also had myopic maculoschisis, in patients with pathologic myopia (see Figure 2). We recorded preoperative and postoperative best corrected visual acuity, OCT findings, and axial lengths. The surgical procedure involved pars plana vitrectomy with the placement of the myopia support device in one patient, while the other patient underwent placement of the myopia support device without vitrectomy.

**Results:** Successful repair of posterior retinal detachment was achieved in both cases, with complete resolution of maculoschisis in the case with additional pathology. The myopia support device effectively provided the desired indentation, assisting in or completely repairing the posterior retinal detachment. Follow-up periods were 8 months for one case and 6 months for the case with additional maculoschisis pathology. The surgical procedure was found to be easy and predictable.

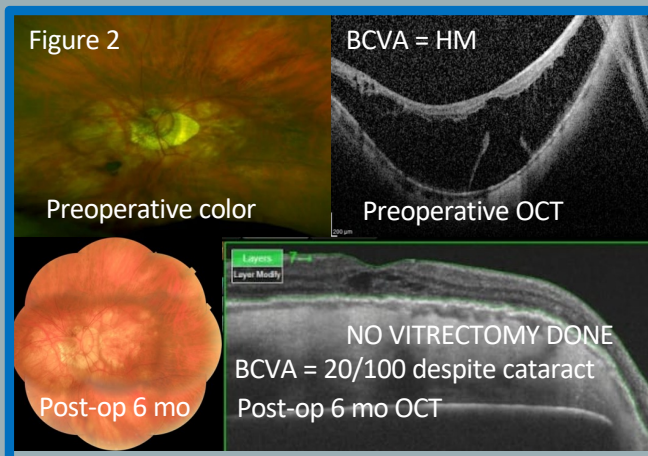
**Conclusion:** The myopia support device is a valuable addition to the surgical procedure involving vitrectomy, as well as a standalone procedure, for repairing posterior pole retinal detachments with or without myopic maculoschisis in patients with pathologic myopia.

**Financial Disclosure:**

Akduman L: AbbVie: Speaker Bureau Member; LA Eye, LLC: CEO and Founder, holds the intellectual property rights, patented product.  
Ozdek S: Novartis: Consultant and Speaker Bureau Member; Bayer: Consultant and Speaker Bureau Member; Allergan: Consultant and Speaker Bureau Member; Roche: Consultant and Speaker Bureau Member  
Ermis S: None  
Artunay O: None

**Human Research Disclosure:**

This study did not require an IRB.  
Informed consent was obtained from the patients



Scan the QR code or visit  
[macularbuckle.com](http://macularbuckle.com) for a link  
to watch a 40-second surgery video

This device was the winner of 2022 Winning Pitch Challenge by ASRS.

This study was submitted to JVRD for publication

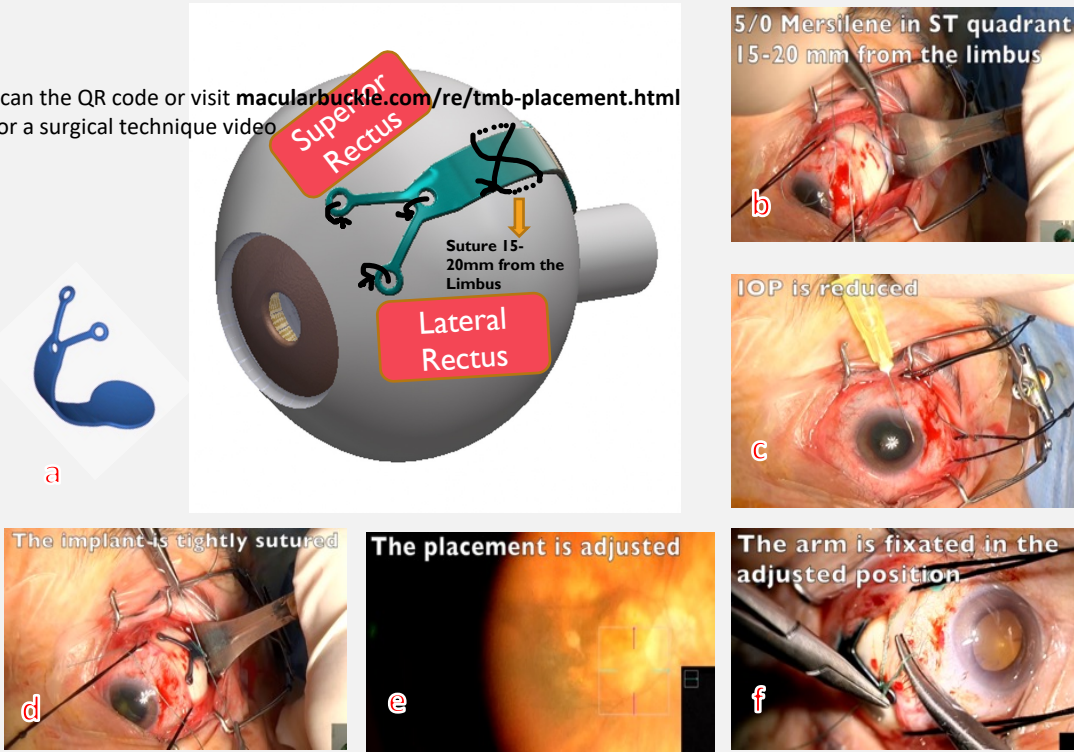
**References:**

Akduman L. A Titanium Macular Buckle Implant Designed for an Easy Placement in Myopic Macular Holes. Retin Cases Brief Rep 2022 Aug 25 doi: 10.1097/ICB.0000000000001349. Online ahead of print."

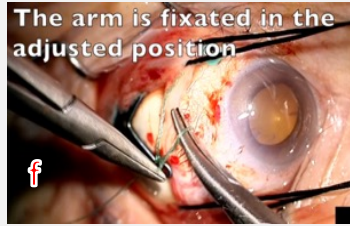
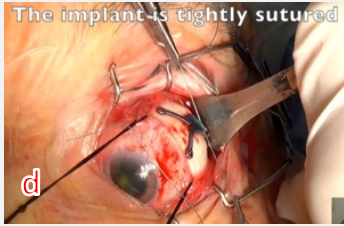
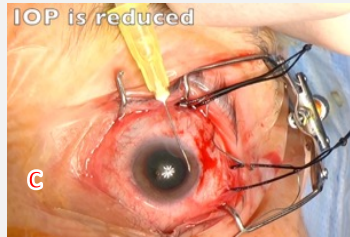
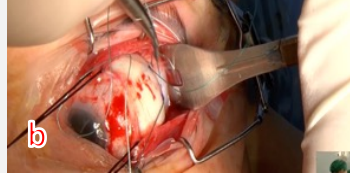
# SURGERY INSTRUCTIONS

## BASIC SURGICAL TECHNIQUE

Scan the QR code or visit [macularbuckle.com/re/tmb-placement.html](http://macularbuckle.com/re/tmb-placement.html) for a surgical technique video



5/0 Mersilene in ST quadrant  
15-20 mm from the limbus



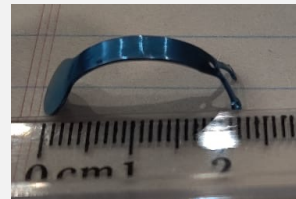
## SUGGESTED ADJUSTMENTS FOR APPROXIMATING TO THE DESIRED POSTOPERATIVE RESULTANT AXIAL LENGTH

**(STRETCH THE IMPLANT BODY TO ADJUST – DO NOT BEND THE HORNS WITH THE HOLES)**

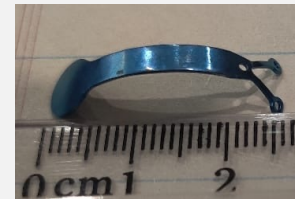
The postoperative axial length may vary depending on the tightness of the surgical suture and the individual technique employed by the surgeon.

The implant in the original packaging has an End-to-End distance of 21.5 mm, which is estimated to provide a target post-operative axial length of  $25 \pm 1$  mm, regardless of the pre-operative axial length (refer to the image on the left).

In cases where the desired final axial length differs from this target, especially when a significant reduction in axial length may adversely affect post-operative refraction (e.g., pseudophakic eyes), a lesser indentation, such as shortening the axial length by 2 mm with the implant, is likely to achieve the desired improvement in macular pathology. To determine the recommended modification for the End-to-End distance in such situations, please refer to the table below (see below), irrespective of the pre-operative axial length.



End-to-End Distance = 21.5 mm

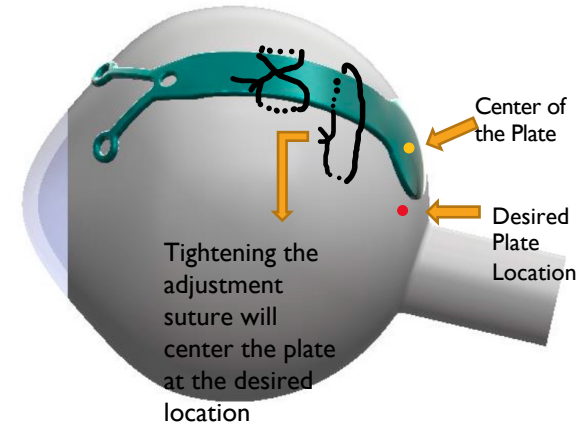


End-to-End Distance = 25.0 mm

TABLE:

Desired Postoperative Axial Length (mm) Regardless of the preoperative axial length.	Recommended End-to-End Distance (mm)
25 ± 1	22.00
26 ± 1	22.50
27 ± 1	22.75
28 ± 1	23.25
29 ± 1	23.75
30 ± 1	24.25
31 ± 1	24.50
32 ± 1	25.00
33 ± 1	25.25
34 ± 1	25.50
35 ± 1	25.75
36 ± 1	26.00
37 ± 1	26.25
38 ± 1	26.50

## SUGGESTED TECHNIQUE FOR FURTHER ADJUSTING THE PLATE LOCATION IF DESIRED



Scan the QR code or visit [macularbuckle.com/re/tmb-placement](http://macularbuckle.com/re/tmb-placement) for a 40-second surgical technique video

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**Conclusion:** The myopia support device is a valuable addition to the surgical procedure involving vitrectomy, as well as a standalone procedure, for repairing posterior pole retinal detachments with or without myopic maculoschisis in patients with pathologic myopia.