Cyclotorsion Compensation

We read with great interest the article by Chen et al. in the March 2019 issue. The authors evaluated the effect of cyclotorsion compensation during small incision lenticule extraction (SMILE) surgery on refractive outcomes. They first marked the peripheral cornea with a marker pen at the 3- and 9-o’clock positions at the slit lamp. After placing the patient on the surgical table of the VisuMax laser suite (Carl Zeiss Meditec, Jena, Germany), they activated the suction during the docking phase and measured the amount of cyclotorsion angle between the horizontal reticule of the eyepiece and the 3- and 9-o’clock positions. After this step, they rotated the eye with a suction cup during the docking phase to compensate for cyclotorsion. Although the authors did not report any complications, this maneuver may cause suction loss. Because the vacuum level of the VisuMax laser is lower than that of other femtosecond lasers, this technique may not be preferred by some surgeons for fear of suction loss.

We want to share our risk-free technique. After marking the cornea at the 3- and 9-o’clock positions with the help of the slit lamp, if the horizontal reticule of the surgical microscope does not overlap with the 3- and 9-o’clock meridian, the patient’s head and body are rotated until these two lines overlap. After this step, the patient is instructed not to move until the end of the procedure. In this way, cyclotorsion can be easily compensated for in SMILE surgery.

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Reply

We thank Drs. Kose and Sakarya for sharing their technique. Cyclotorsion compensation by rotating the suction plate is a safe and efficient technique for patients with astigmatism. Up to now, We have done small incision lenticule extraction (SMILE) surgery on more than 45,000 eyes. One in four of these eyes (> 15,000 eyes) has received SMILE surgery with cyclotorsion compensation, and no suction loss caused by the suction plate rotation has happened in any of these cases. Moreover, except for the 622 eyes in our study,1 we also observed the refractive surgery results of patients with simple myopic astigmatism and patients with astigmatism of more than -3.00 diopters, and these clinical data all showed that our technique of cyclotorsion compensation during SMILE surgery provides efficient, predictable, and safe refractive correction in patients with myopic astigmatism.

In addition, many refractive surgeons have learned from us and used our technique in their own clinical practice with good postoperative results. We encourage the authors to visit us to observe.

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REFERENCE


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