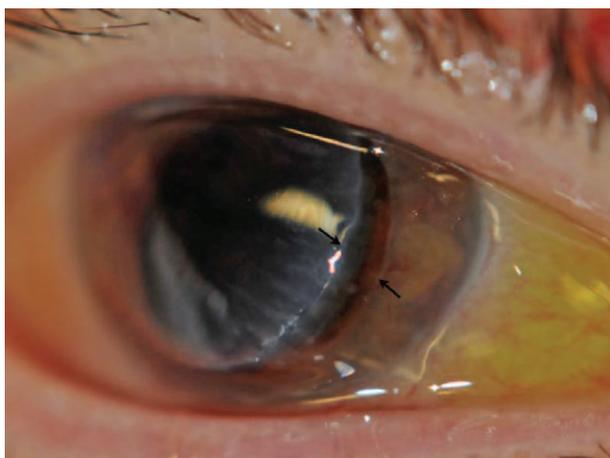


## Perioperative Corneal Transplant Wound Dehiscence

Daniel L. Learned, M.D., Chirag K. Gupta, M.D., Lori A. Stec, M.D., David G. Heidemann, M.D.



**P**ENETRATING keratoplasty is a common ophthalmic procedure in the United States, with more than 35,000 surgeries performed annually. The graft–host junction is a site of permanent weakness, potentially only achieving 50 to 70% of its original tensile strength.<sup>1</sup> This weakness increases the risk of a wound dehiscence after minimal trauma. We present an image (fig.) of a corneal transplant wound dehiscence as a rare, but visually devastating, complication during the perioperative period. The image depicts a 7-clock-hour dehiscence of a corneal transplant previously stable for 35 yr (arrows point to the dehiscence at the graft–host junction).

A wound dehiscence is a known complication of penetrating keratoplasty surgeries that frequently has devastating visual outcomes.<sup>1–3</sup> The final visual acuity following a traumatic wound dehiscence varies among studies, but is generally worse than 20/200.<sup>1–3</sup> To reduce the risk of rupture in corneal transplant patients during the perioperative period,

the authors recommend applying an eye shield before the induction of anesthesia until the patient is able to cooperate in the postanesthesia care unit. This provides a needed layer of protection from accidental trauma or direct pressure, two of the most likely causes of the wound dehiscence in this patient. Additionally, having an eye shield in place reminds caregivers to take additional caution when manipulating and positioning patients. Although taping an eyelid does prevent corneal exposure, more cautious measures, such as an eye shield, should be taken for patients with inherently weak ocular states, such as a previous corneal transplant, to prevent a wound dehiscence.

### Competing Interests

The authors declare no competing interests.

### Correspondence

Address correspondence to Dr. Learned: daniel.learned@gmail.com

### References

1. Elder MJ, Stack RR: Globe rupture following penetrating keratoplasty: How often, why, and what can we do to prevent it? *Cornea* 2004; 23:776–80
2. Tseng SH, Lin SC, Chen FK: Traumatic wound dehiscence after penetrating keratoplasty: Clinical features and outcome in 21 cases. *Cornea* 1999; 18:553–8
3. Kawashima M, Kawakita T, Shimmura S, Tsubota K, Shimazaki J: Characteristics of traumatic globe rupture after keratoplasty. *Ophthalmology* 2009; 116:2072–6

From the Department of Ophthalmology, William Beaumont Hospital, Royal Oak, Michigan (D.L.L., C.K.G., L.A.S., D.G.H.); Michigan Cornea Consultants, Southfield, Michigan (C.K.G., D.G.H.); and Department of Ophthalmology, William Beaumont School of Medicine, Oakland University, Rochester, Michigan (L.A.S.).

Copyright © 2015, the American Society of Anesthesiologists, Inc. Wolters Kluwer Health, Inc. All Rights Reserved. *Anesthesiology* 2016; 124:185