Surgical Pearls and Technique: Anterior Segment Ophthalmic Surgery

In-office ocular surface reconstruction using the AmbioDisk.

BY JAI G. PAREKH, MD, MBA

In this case, I report the in-office use of a thick dehydrated amniotic membrane disk (AmbioDisk, IOP Ophthalmics) retained with a large contact lens (Kontur, Kontur Kontact Lens Co., Inc.) in the reconstruction of the ocular surface (Figure 1).

CASE DESCRIPTION

A 74-year-old woman presented with a persistent epithelial defect due to herpes simplex keratitis after uneventful cataract surgery in the right eye (Figure 2). She was placed on the usual postoperative course of name-brand fluoroquinolones, steroids, and nonsteroidal agents after surgery. One month postoperatively, she presented with herpes simplex epithelial keratitis, which was successfully treated with a 2-week course of ganciclovir ophthalmic gel 0.15% (Zirgan, Bausch + Lomb) and oral famciclovir. The patient's BCVA was 20/50, and she was prescribed preservative-free artificial tears six times per day.

Seven weeks later, the patient complained of chronic eye rubbing, ocular irritation, and a foreign body sensation in the right eye. On examination, she had an epithelial defect with no infiltrate, anterior chamber cell, or flare. Treatment with topical fluoroquinolones (drops and ointment), artificial tears, punctal plugs, and tape tarsorraphy had a minimal effect on the persistent epithelial defect. To restore her ocular surface, the patient agreed to reconstruction using a thick dehydrated amniotic membrane tissue in the form of a disk. Given the simplicity of the technique, the case was done in the office.

After giving her consent, the patient was transitioned to a supine position. After receiving topical lidocaine gel and besifloxacin fluoroquinolone drops (Besivance, Bausch + Lomb), a lid speculum was placed in the right eye. The 15-mm Ambio5 dehydrated amniotic membrane disk (100-µm nominal thickness) was hydrated and manipulated into the concavity of an 18-mm Kontur contact lens (Figure 3). The unit was placed onto the ocular surface with the contact lens retaining the disk. The patient tolerated the procedure well.

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Figure 1. The dehydrated amniotic membrane disk (AmbioDisk, IOP Ophthalmics) is shown on forceps.

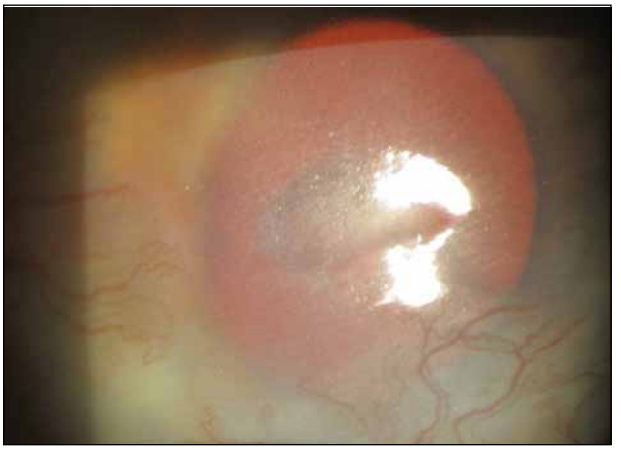

Figure 2. A persistent epithelial defect in a patient with herpes keratitis.

Figure 3. The persistent epithelial defect covered with the AmbioDisk and Kontur lens.

ated the procedure well and was sent home with a postoperative course of besifloxacin, ganciclovir, and as-needed treatment with preservative-free artificial tears (Refresh Optive, Allergan, Inc.).

POSTPROCEDURE COURSE

The patient was seen on the first day after the procedure, and she had an intact ocular surface while the AmbioDisk remained in place. Her medication regimen remained the same. On day 7 after the procedure, the surface remained intact with significant closure of the persistent epithelial defect. The AmbioDisk was removed, and the besifloxacin and ganciclovir were also discontinued. On day 14, her visual acuity was 20/40, and the ocular surface revealed no epithelial defect. The patient continued the use of the

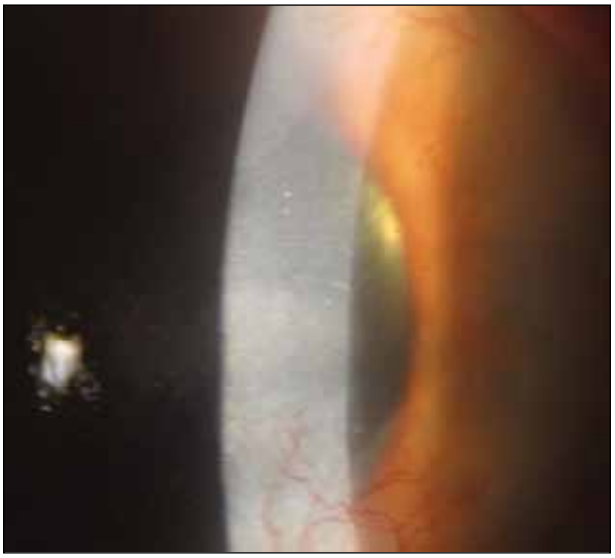

Figure 4. Postprocedure day 28: resolution of the epithelial defect.

"The patient was seen on the first day after the procedure, and she had an intact ocular surface while the AmbioDisk remained in place."

preservative-free artificial tears, and by day 28, she was asymptomatic. Her quality of vision improved, and there were no signs of a recurrent epithelial defect (Figure 4).

CONCLUSION

The AmbioDisk with the Kontur lens is a very effective adjunct in the reconstruction and maintenance of the ocular surface and can be performed in the office. ■

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