

# The Adjunct Use of Dehydrated Amniotic Membrane (AmbioDry™) For the Treatment of Ocular Chemical Burn

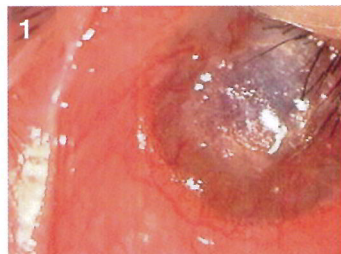
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## PURPOSE

To report the use of dehydrated amniotic membrane tissue in the reconstruction of the anterior ocular segment of a severe chemical burn patient.

A 42-year-old man, with an eight-year history of a chemical burn from industrial lye in his left eye, had severe upper eyelid cicatricial damage, along with stage 4 symblepharon, due to the chemical injury and the depletion of epithelial stem cells. Besides the significant visual debilitation of LP vision, the patient for the last seven years had severe symptoms of erythematous ocular surface, continued tearing, irritation and of course poor cosmesis (Photo 1).



The extensive procedure on the left eye was performed with peribulbar anesthesia. Initially, symblepharon lysis was performed, removing all the cicatricial tissue from the anterior bulbar surface and the palpebral conjunctival surface. A penetrating keratoplasty was then performed with a placement of the corneal graft of 8mm diameter onto a 7.5mm host trephination, with 16 interrupted 10-0 nylon sutures. During the PK procedure, significant cataract formation was noted. A cataract procedure with intraocular lens implantation was performed concomitantly.

Subsequently, two conjunctival-limbal autografts, harvested from the healthy right eye, were sutured into place superiorly from 11 to 1 o'clock and inferiorly from 5 to 7 o'clock with four 10-0 nylon sutures.

Finally, a 2x3 cm dehydrated amniotic membrane (AmbioDry™) was fashioned over the cornea as an overlay graft with graft coverage beyond the perimeter of the penetrating keratoplasty. The graft was placed on the eye in its dry state (Photo 2) and secured into place by hydration with BSS. In order to maintain stability of the amniotic

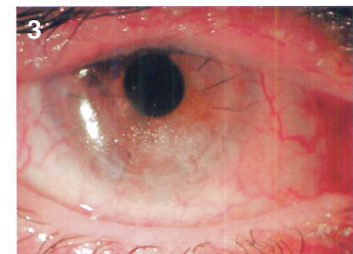
membrane graft at the site, an 18mm diameter bandage contact lens was positioned.



The patient was placed on topical corticosteroid and antibiotic treatment, as well as oral

Cyclosporine A. Immediately postoperatively, the patient regained significant vision. His preoperative visual acuity as noted above was light perception, and postoperatively at 3 months, he was evaluated to be 20/40 without correction, and 20/30 with pinhole.

At three-month follow-up, the patient appears to have a clear graft (Photo 3). The conjunctival-limbal autografts have stabilized and the amniotic membrane



has resolved. The patient will continue oral Cyclosporine A for approximately three additional months (a total of six months prescription), followed by a taper period. Creatinine levels are monitored during this interval. The subject remains a high-risk corneal transplant patient. Visual prognosis at this point is very good.

Dr. Kanellopoulos is an eye surgeon specializing in Cornea Transplantation, complicated Glaucoma, and Refractive surgery. His background includes Medical school training at Southern Illinois University, and Residency training at the State University of New York at Stony Brook / Nassau County Medical Center. He has sub-specialized in External Diseases, Cornea and Refractive surgery with Fellowship training at Cornell University Medical College and Harvard Medical School. He has sub-specialized in Glaucoma surgery with Fellowship training at Harvard Medical School.

## CASE REPORT

AmbioDry: Kanellopoulos/Burn Case Report

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