

AMNIOTIC MEMBRANE USE IN TREATING CORNEAL ABRASION DURING PREGNANCY

INTRODUCTION

Amniotic membranes have been widely used in eye care to treat various conditions ranging from corneal defects, such as ulcers, to severe dry eye, to herpes simplex keratitis. A dehydrated amniotic membrane is a thin avascular tissue typically comprised of collagen, hyaluronic acid, laminin, proteoglycans, elastin, and fibronectin sourced from placental tissue that is placed on the front surface of the eye to facilitate healthy treatment and healing of the ocular surface. The two most common types of amniotic membranes used in eye care are cryopreserved and dehydrated. This was my first experience using a dehydrated membrane, specifically the Apollo Amniotic Membrane, to treat a corneal defect.

CASE SUMMARY

The patient was a 32-year-old female that presented with a chief complaint of a painful right eye associated with blurred vision, photophobia, red eye, and profuse tearing that began the day prior after a possible scratch to the eye. The patient's visual acuity was 20/30 OD with correction. The patient denied any use of eyedrops before her initial visit and had discontinued contact lens use. Upon examination, it was found that the patient had a very deep corneal abrasion, 4.5 mm long by 2 mm wide, that was very close to the visual axis. The patient was pregnant at the time of her visit. The patient was not followed for any other systemic conditions.

TREATMENT PLAN & RESULTS

Given that the patient was pregnant, safe pharmacologic options were limited. After discussion with the patient, we decided an amniotic membrane was a great option for her. Anesthetic was first applied to the right eye using proparacaine 0.5% drops. Then, a 12 mm Apollo Amnion disc was placed into a bandage contact lens (BCL) which was then placed on to the patient's right cornea.

Typical follow-up schedule for the amniotic membrane is three to four days, however, due to schedule constraints the patient was seen back for a one-day follow-up to remove the BCL. To my amazement, the abrasion had almost completely resolved and only 1-2+ corneal staining was revealed with sodium fluorescein dye along with trace corneal edema. The patient's best corrected visual acuity was 20/20-1 and she reported much improvement in her symptoms. To facilitate improved healing and to prevent corneal scarring, the patient was prescribed an antibiotic ointment, polysporin 500 unit-10,000 unit/gram topical ointment and was directed to apply a pea sized amount OD q2hs. The patient was also instructed to supplement with Systane

Hydration preservative free artificial tears between applying the ointment. It was important that we followed a strict follow-up schedule given the proximity of the abrasion to the visual axis. The patient was advised to continue contact lens discontinuation.

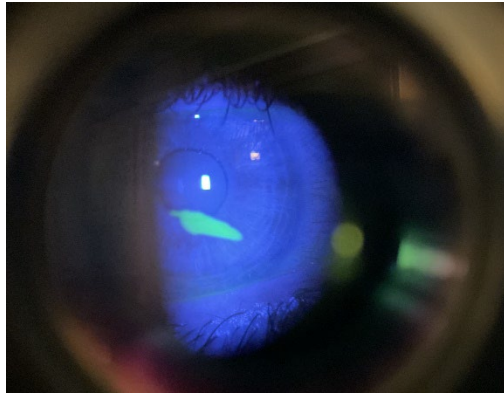


Image 1: Initial presentation of the corneal abrasion.

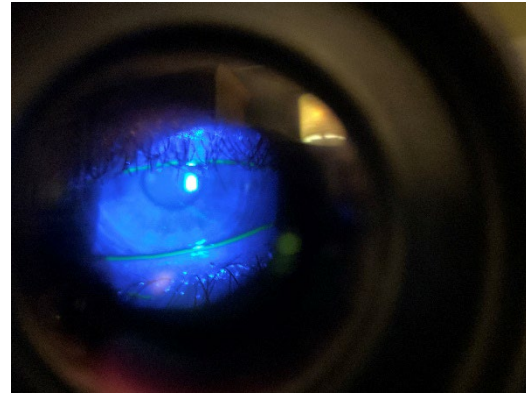


Image 2: Presentation of corneal abrasion after just one day of wearing Apollo amniotic membrane.

At the one-week follow-up the abrasion was completely resolved. The patient's best corrected visual acuity was 20/20 OD and the corneal scar was minimal. The patient was able to resume contact lens wear and was instructed to begin using Optase Hylo nighttime ointment qhs to prevent recurrent epithelial erosion.

POST-PLACEMENT OBSERVATIONS

I was extremely satisfied with the impressive outcome of this patient's treatment, especially with the expedited healing of the cornea, which I attribute to the Apollo amniotic membrane that was utilized. The dehydrated amniotic membrane was a great option for this patient given our limited treatment options and easy application. I highly recommend this treatment option for any patient.

REFERENCES

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OTHER INFORMATION

Dr. Arianas is not affiliated with, nor is she a paid consultant for Atlas Ocular.

Demetra Arianas, O.D. earned her Doctor of Optometry degree from Illinois College of Optometry located in Chicago, Illinois and a dual Bachelors degree of Science and Liberal Arts in Biology and Psychology from the University of Illinois at Chicago.

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