INTRODUCTION

A normal healthy corneal nerve network is vital to healthy maintenance of a functioning corneal epithelium. Any breach in the integrity of the corneal epithelium may result in a wound response. Most corneal epithelial defects heal quickly and without incident, but under certain circumstances the epithelial defect may be slower to heal or may not heal at all. When a defect does not heal within a normal time frame, it is classified as a persistent epithelial defect (PED). A corneal PED is uncommon, but can have serious eye health consequences that can include infection, scarring, melting, and perforation.

MEDICAL HISTORY

A 44 year old female patient presented with a history of insulin-dependent diabetes and a non-healing PED. A vitrectomy had been performed on the patient which resulted in a scraped cornea that occurred during the procedure. Over the course of approximately three months the patient was treated with aggressive lubrication therapies with no desired outcomes. Autologous serum drops, which have been reported to be beneficial in PED cases, were prescribed, but did not result in improvement of this defect. Finally, a bandage contact lens was placed and did result in the healing of the defect. However, once the bandage contact lens was removed, the defect recurred.

CLINICAL TREATMENT PROTOCOL

In the clinic, a BioDOptix Amniotic Extracellular Matrix was applied to the defect without the use of glue or suture. A bandage contact lens was placed over the allograft.

POST-OPERATIVE CLINICAL OBSERVATIONS

At one week post-application, the BioDOptix allograft was fully incorporated into the host ocular tissue, and the corneal epithelial defect was completely healed. The patient reported complete relief from pain immediately after application. At the eight week follow-up, the defect was still completely healed, and there were no signs of recurrence.

CONCLUSION

In this patient, the BioDOptix allograft demonstrated the ability to completely resolve the non-healing persistent epithelial defect quickly after other therapies had failed. Additionally, the BioDOptix Amniotic Extracellular Matrix provided pain relief after application in the clinic.
About Dr. Hamilton

A board-certified ophthalmologist, Dr. Hamilton earned his medical degree from the University of Alabama. He completed his internship at the Carraway Methodist Medical Center in Birmingham, AL, a residency at the Eye Foundation Hospital, Birmingham and a fellowship in cornea and external disease with Piedmont Hospital, Atlanta, GA.

Dr. Hamilton specializes in corneal external diseases and surgery, refractive surgery and cataract surgery.