

PROKERA Success Tips and Pearls

A therapeutic device that heals damaged ocular surfaces, PROKERA biologic corneal bandage promotes an elegant type of wound healing.

REGENERATION

Regenerative wound healing, available from PROKERA (Bio-Tissue), occurs rapidly without scar formation. The amniotic membrane, which surrounds the fetus during pregnancy, has potent healing properties that are responsible for regeneration. Bio-Tissue products leverage these key benefits to suppress ocular surface inflammation, scarring, and angiogenesis.

“PROKERA opens up an entire new avenue of treatments for me,” says Derek N. Cunningham, OD. “It allows me to not only actively address inflammation and really help the body repair itself faster, but it also helps accelerate natural healing processes.”

CRYOPRESERVED VERSUS DEHYDRATED

Bio-Tissue’s proprietary CryoTek cryopreservation method maintains the structural integrity and key biologics, including the heavy chain hyaluronic acid, pentraxin 3 (HC-HA/PTX 3) biologic signaling matrix necessary for controlling inflammation and expediting quality healing. The HC-HA/PTX 3 matrix halts the adult immune response, suppresses matrix metalloproteinase 9, giant cells, and T-cell formation, and it promotes stem cell proliferation and regeneration.¹⁻⁴ Dehydration destroys the signaling matrix, which depletes the PTX3 and causes the hyaluronic acid to become low molecular weight and pro-inflammatory.⁵

“When we are considering which membrane is going to be the closest to the bioavailability we would have in the natural amniotic membrane tissue, cryopreserved is our product of choice,” says Dr. Cunningham.

WHO BENEFITS?

Patients with acute or chronic damaged corneas caused by infectious processes, abrasions, herpetic conditions, or epithelial defects may benefit from PROKERA, because the device speeds up the healing process and enhances scarless healing.

“On a routine basis, I use PROKERA for chronic disease states, such as recurrent corneal erosions and corneal complications of chronic dry eye,” says Dr. Cunningham. “It works very well on significant recalcitrant dry eye that is nonresponsive to other therapies.”

It is important to not wait to use PROKERA until end-stage disease, especially with chronic conditions, because nothing responds well in end stage. Treating the disease early leads to quicker response times, especially for chronic dry eye (Figure).⁵

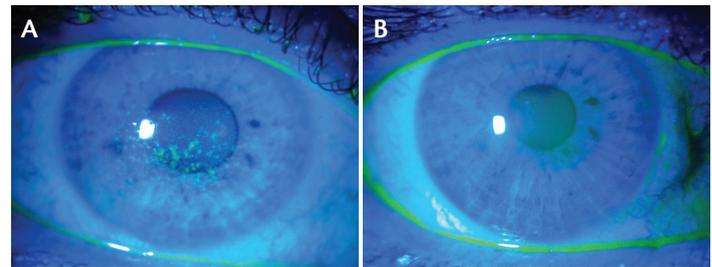


Figure. Dry eye case with staining before treatment (A) and following treatment with PROKERA (B).

PROKERA is not limited to a specific list of indications. It may be used for any condition that needs decreased inflammation and scarring, and for the overall well-being of the corneal tissue.

INSERTION TIPS

The right time to insert PROKERA depends upon the condition. For patients with more chronic conditions, physicians may take the time to educate them about the process and then schedule the insertion for a more appropriate time, such as over a weekend. For patients with acute conditions, physicians may insert PROKERA the day of the visit, explaining to them that they may have slightly blurred vision out of that eye.

Once the PROKERA lens is removed, two things will be noticeable: an absolutely pristine-looking cornea and a continued regenerative effect, which happens anywhere from days to weeks after. ■

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2. He H, Tan Y, Duffort S, et al. In vivo downregulation of innate and adaptive immune responses in corneal allograft rejection by HC-HA/PTX3 complex purified from amniotic membrane. *Invest Ophthalmol Vis Sci.* 2014;55(3):1647-1656.
3. Li W, He H, Chen YT, et al. Reversal of myofibroblasts by amniotic membrane stromal extract. *J Cell Physiol.* 2008;215(3):657-664.
4. Cooke M, Tan EK, Mandrycky C, et al. Comparison of cryopreserved amniotic membrane and umbilical cord tissue with dehydrated amniotic membrane/chorion tissue. *J Wound Care.* 2014;23(10):465-474,476.
5. Cheng AM, Zhao D, Chen R, et al. Accelerated restoration of ocular surface health in dry eye disease by self-retained cryopreserved amniotic membrane. *Ocul Surf.* 2016;14(1):56-63.

To see physicians discussing the benefits of using PROKERA, visit eyetubeod.com/?v-udemopili.

Derek N. Cunningham, OD

- Director of optometry, Dell Laser Consultants, Austin, Texas
- dcunningham@dellvision.com; (512) 347-0255
- Financial disclosure: consultant to Bio-Tissue