AmnioWhat?!  
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First described for use in surgery in 1910\textsuperscript{1}, the amniotic membrane is the innermost membrane that surrounds the fetus in the amniotic cavity. As the fetus enlarges, the membrane fuses with the chorion to form the fetal membrane. The fetal and amniotic membranes are one with, and become part of, the placenta\textsuperscript{3}. The amniotic membrane itself is a thin, translucent membrane that varies in thickness and contributes to the homeostasis of amniotic fluid. It has no blood vessels and has no direct blood supply\textsuperscript{4,5}. There are several proposed mechanisms for the beneficial effects in ophthalmic use. These include, but are not limited to:

- **Anti-inflammatory.** Mediated by IL-10, production of inhibin and activin, and presence of IL-1 receptor antagonist, various other anti-inflammatory markers\textsuperscript{2,5}
- **Anti-scarring.** Through a direct interaction between amniotic membrane stromal matrix and ocular surface fibroblasts\textsuperscript{2}
- **Promotes epithelialization.** Amniotic basement membrane reinforces adhesion of basal epithelial cells, promotes epithelial differentiation, helps prevent apoptosis\textsuperscript{3}
- **Inhibits Angiogenesis.** Mediated by thrombospondin-1, endostatin, mRNA expression of metalloproteases\textsuperscript{6}
- **Inherent Anti-microbial** action as evidenced by several studies\textsuperscript{3}

The procurement of tissue starts with a healthy mother and detailed social history. Informed consent is obtained from all donors and screening for communicable diseases, specifically syphilis, HIV, and hepatitis are carried out\textsuperscript{3}. Although different protocols exist, the majority of tissue in the United States is procured by a method described by Tseng, et al\textsuperscript{7}. This method consists of storing the pieces of membrane in 50% glycerol and then storing frozen at -80°C. Tissue is delivered only after a second serological test, which is carried out six months after delivery. Tissue can be stored and used for up to two years post-delivery and is then transported to the user site in dry ice, is thawed and rinsed in a buffered normal saline immediately before use\textsuperscript{2,3,7}.

**References:**


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