

# Efficiency of Amniotic Membrane Transplantation in Treatment of Human Cornea Destruction

Sayed Alireza Mirsane <sup>1</sup>, Sayed Mojtaba Mirsane <sup>2</sup>

*1. Student of Surgical Technology, School of Nursing and Midwifery, Kashan University of Medical Science, Kashan, Iran*

*2. Education Office, Khansar Town, Esfahan, Iran*

Corresponding Author: Sayed Alireza Mirsane, E-mail: alireza.seyed70@gmail.com

## ABSTRACT

**Background:** Our aim was evaluate of amniotic membrane transplantation (AMT) utility in treatment of human cornea and sclera destruction.

**Material and Methods:** We did a systematic review of 22 studies identified by searching PubMed, Ovide and Elsevier.

**Results:** Studies showed cultivated corneal epithelial transplantation by using amniotic membrane can be used for severe stem cell deficiencies and it have some of the antiinflammatory properties of the fetal tissue. Plus AMT promotes normal conjunctival epithelialization while suppressing fibrosis formation Results indicated this procedure, especially when performed with limbal autograft transplantation, appears to be effective for the treatment of chemical or thermal burns of the ocular surface. also multilayered AMT may be effective for the treatment of deep ulceration of the cornea and sclera. Analysis suggested AMT appears to be a safe method of restoring a stable corneal epithelium for limbal stem cell deficiency and can be considered as an alternative to limbal autograft or allograft.

**Conclusion:** We concluded: AMT is a anti-inflammatory and it can promote severe stem cell deficiencies and normal conjunctival epithelialization also AMT with limbal autograft transplantation be effective for chemical or thermal burns of the ocular surface. Multilayered AMT be useful for treatment of deep ulceration of the cornea and sclera

Tissue engineering and regenerative medicine in Ophthalmology

Advantages of amniotic membrane transplantation in remedy of human destruction of cornea