Introduction

In 1910 Davis was the first to report the use of fetal membranes as surgical material in skin transplantation. Since then the use of amniotic membrane in surgery has been expanded. It is now utilized as a biological dressing for burned skin, skin wounds, and chronic ulcers of the leg, as an adjunctive tissue in surgical reconstruction of artificial vagina, and for repairing Omphaloceles. It has also been used to prevent tissue adhesion in surgical procedures of the abdomen, head, and pelvis ***(Trelford and Trelford, 1979).***

In the 1940s several authors reported the beneficial role of amniotic membrane in treating a variety of ocular surface disorders ***(de Rotth, 1940).*** However, its use was abandoned for decades until recently, when it was reintroduced to Ophthalmologists. Several studies have addressed this subject and the scope of the application of amniotic membrane transplantation (AMT) in the management of ocular surface disorders is ever increasing ***(Dua and Blanco, 1999).***

Certain characteristics make the amniotic membrane ideally suited to its application in ocular surface reconstruction. It can be easily obtained and its availability is nearly unlimited. The tissue can

be preserved at -80°C for several months, allowing sufficient time to plan surgery or consider a trial of other options, and also offering only the substrate without the live cells to be transplanted, and thus no adverse effects such as allograft rejections were reported. Amniotic membrane does not express HLA-A, B, or DR antigens and hence immunological rejection after its transplantation does not occur ***(Akle et al, 1981).*** It is also believed to have antimicrobial properties, reducing the risks of postoperative infection ***(Talmi et al, 1991).*** It was reported that, upon sudden freezing and defrosting, the live epithelial cells of the membrane die, but the cytokines they contain remain active. It is these cytokines that have the beneficial effects of the amniotic membrane ***(Tseng et al, 1997).*** Antifibroblastic activity and cell migration/growth promoting activity have also been demonstrated with regard to the amniotic membrane ***(Shimazaki et al, 1998).***

AMT is used now for treatment of Ocular Cicatricial Pemphigoid and Steven-Johnson syndrome ***(Tsubota et al, 1996).*** Chemical and thermal burns ***(Shimazaki et al, 1997),*** persistent epithelial defects of the cornea***,*** dry eye states ***(Lee and Tseng, 1997),*** conjunctival surface reconstruction after the surgical removal of a large portion of

the conjunctiva ***(Tseng et al, 1997),*** recurrent ptrygium associated with symblepharon ***(Shimazaki et al, 1998),*** and finally symptomatic bullous keratopathy ***(Renato et al, 1999).***