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ANKYLOBLEPHRON AND SYMBLEPHRON RELEASE WITH AMNIOTIC MEMBRANE GRAFTING FOR THE STEVEN JOHNSON SYNDROME

Ophthalmology

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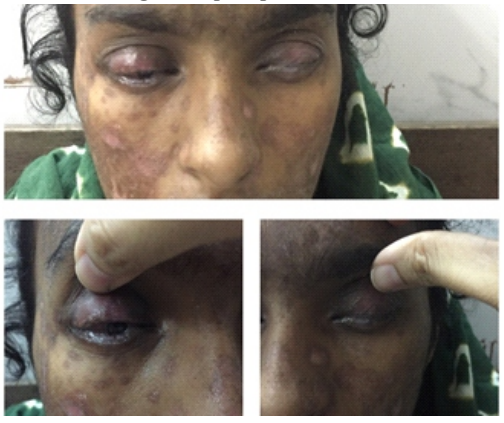
KEYWORDS

INTRODUCTION:

An 18-year-old woman was referred with late sequelae of phenytoin induced Steven–Johnson syndrome. At the time of presentation, the symblepharon was present in both eyes and ankyloblephron was present in left eye. symblephron was involving the both lids to almost the whole of the cornea.

Figure 1: pre operative view



AIMS AND OBJECTIVES:

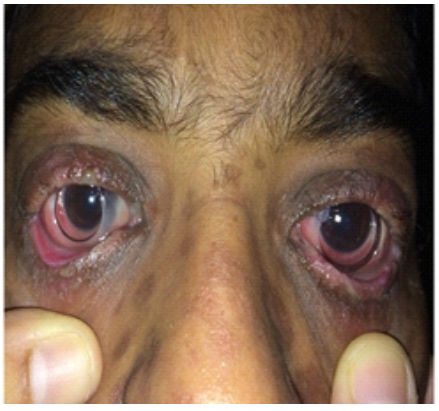
Role of amniotic membrane grafting for treatment of chronic phase of ocular surface disorders like SJS for restoration of the anatomical structures and physiologic properties of the ocular surface.

METHODOLOGY:

Ocular examinations were not possible due to the symblepharon. B-scan ultrasonography revealed acoustically clear vitreous, normal chorioretinal thickness, and normal optic nerve head, with an attached retina.

Routine blood examination, blood glucose, and serum urea and creatinine levels were within normal limits. Physician evaluation was done by meticulous history taking, clinical examinations, and key laboratory examinations to exclude other blistering skin diseases such as pemphigus vulgaris, bullous pemphigoid, mucocutaneous diseases like Behçet's syndrome and Reiter's syndrome, and vasculitis like systemic lupus erythematosus. The patient was taken up for surgery and ankyloblephron was released by surgically with cornea scleral scissor. superficial lamellar dissection of the cornea was done to separate the conjunctivocorneal adhesion, followed by release of symblepharon between palpebral and bulbar conjunctiva. The Amniotic membrane graft (AMG) of size 27 × 8 mm (right eye) and 26 × 8 mm (left eye) was placed over the raw area of superior bulbar conjunctiva and secured with fibrin glue. The lower bulbar conjunctiva was covered by a MMG of size 15 × 7 mm (right eye) and 14 × 7 mm (left eye) and glued in a similar fashion. A bandage contact lens (BCL) was placed over the cornea. This was followed by the placement of a symblepharon ring to prevent the recurrence of symblepharon . The patient was given a systemic antibiotic (cephalexin 500 mg three times a day for 5 days) and a nonsteroidal anti-inflammatory (Ibugesic 100 mg, –paracetamol 500 mg, combination twice daily after meal for 4 days) along with a topical antibiotic steroid (Gatifloxaciin with dexamethasone, one drop six times a day for 1 month) combination, and a tear substitute (Carboxymethylcellulose) was prescribed for six times a day for 6 months. The mucosal graft was well taken up along with corneal re-epithelization. Best corrected visual acuity of 6/60 n both sides after 1 month .

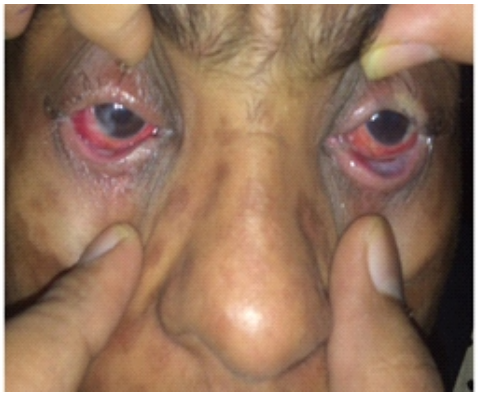
Figure 2:one week post operative view



RESULT:

The re-epithelialization of the corneal epithelium was completed by in 10 days. BCL was removed after 2 weeks and the symblepharon ring was removed at 4 weeks. Except few sectors of peripheral corneal vascularization, no other sequelae were observed postoperatively. The patient showed remarkable recovery. Best corrected visual acuity of 20/120 in both sides after 1 month and 20/80 after 3 months.

Figure 3: one month follow up



DISCUSSION:

The exact etiology of **SJS** is not known and the understanding of the etiopathogenesis and management protocol of ocular adnexal complication of SJS has been limited so far. Often, patients of SJS are treated by a physician or dermatologist in early phases and later referred to an eye care center. Patients often consult an ophthalmologist with severe ocular sequelae only after the resolution of skin lesions, as in our case.

The acute stage of the SJS is characaterized by bilateral catarrhal and membranous conjunctivitis. During the chronic stage of the disease, most patients have various alterations of the ocular surface, such as symblepaharon, entropion, trichiasis, dry eye, limbal cell deficiency, conjunctival inflammation and corneal neovascularization.[4,5] The major aim of treatment in late phases of SJS is ocular surface reconstruction to correct cicatricial sequalae and chronic inflammation.[3] Management option in late cases is a challenge and is often frustrating, because of the combination of various alterations in surface *milieu* causing severe dryness and surface inflammation leading to treatment failure.

Human amniotic membrane is a unique collagenous membrane derived from the innermost submucosa of the placenta, the area in which the human fetus grows and develops within the mother's uterus. Human amniotic membrane is composed of a single epithelium layer, a thick basement membrane, and an avascular stromal matrix.
The innate properties of amniotic membrane make it ideal for wound healing/tissue regeneration and in eye care, the management of corneal and conjunctiva disease/reconstruction.

CONCLUSION:

amniotic membrane transplantation (AMT) is an accepted approach to the surgical management of chronic symblephera because of the unique properties of the membrane,[8] especially in cases with SJS.

The ultimate aim of treatment of the chronic phase of ocular surface disorders like SJS is restoration of the anatomical structures and physiologic properties of the ocular surface.

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