

Amniotic Membrane In Infectious Keratitis

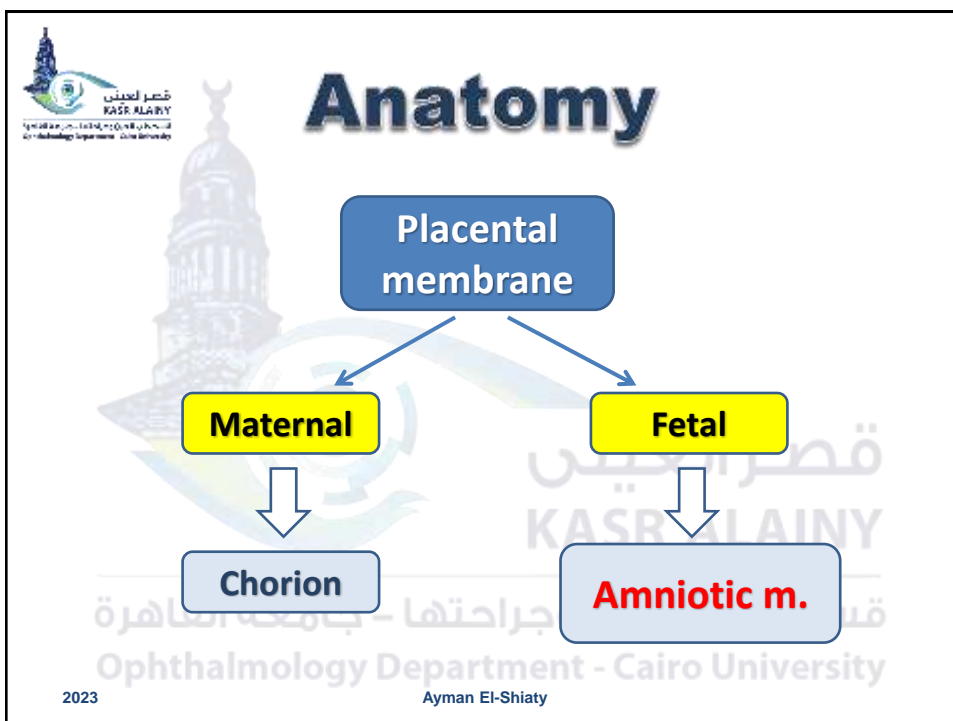



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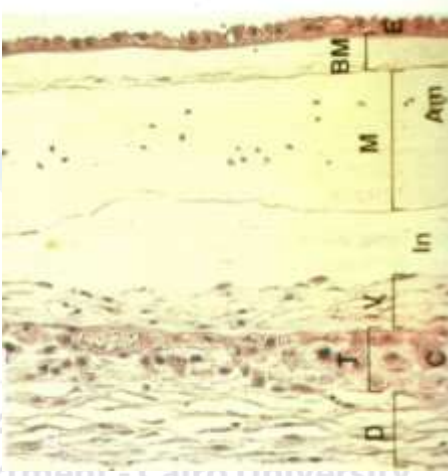


Ayman F. El-Shiaty, M.D.
Professor of Ophthalmology
CAIRO UNIVERSITY





Anatomy

Epith cells
BM
Matrix



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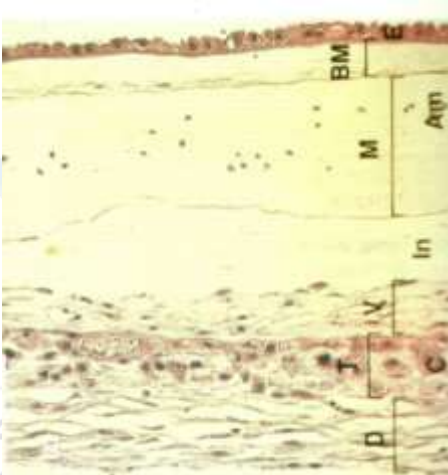
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Anatomy

Epith cells
BM
Matrix


- Thick
- Collagen IV, V, VII
- Fibronectin&laminin

- Hyaluronic a
- Protease inhibitors



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Epith Supporting substrate

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Conj epith differentiation

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-- TGF- β & myofibroblast

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Inflammatory cell apoptosis

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History

Rotth, 1940.....Amnion&Chorion

Sorsby, 1946.....Amnioplastin

Kim&Tseng, 1995.....Cryopreserved

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Amniotic M Transplantation

- Promotes Epithelialization
- Protects damaged SC
- Substrate for subsequent Limbal transplantation
- Barrier to immune cells
- Reduces inflammation and scarring



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Indications

- As a Graft for Conjunctival Diseases
 - Pterygium
 - Bulbar Conjunctival Reconstruction after Removal of Large Lesions or Scars
 - Symblepharon Lysis
 - Conjunctivochalasis
 - With or without Preserved Sclera or Pericardium for Bleb Leakage or Revision
 - Scleral Melt
 - Lid Reconstruction
 - Orbit Reconstruction
- As a Graft for Corneal Diseases
 - Persistent Corneal Epithelial Defect with or without Ulceration
 - Partial Limbal Stem Cell Deficiency
 - Total Limbal Stem Cell Deficiency (with Limbal Transplantation)
 - For Chemical Burns, Stevens-Johnson Syndrome
 - Painful Bullous Keratopathy with Erosion
 - Band Keratopathy
- As a Patch
 - Acute Stage of Chemical or Thermal burns, Stevens-Johnson Syndrome
 - Preventing Scar after PRK or PTk
 - Refractory or Recalcitrant Inflammatory or Ulcerative Keratitis: HSV, HZO, and Vernal
- As a Carrier for Expanding Epithelial Stem Cells *Ex Vivo*

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Indications

+

- Corneal perforation
- Dry eye
- Keratoprosthesis

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Clinical Applications

- Inlay Graft
- Overlay Graft (CL)
- Ex-vivo expansion of SC

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Clinical Applications

- Inlay Graft**
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 - Healing epith
- Overlay Graft (CL)**
 - Inf mediators in tears from stroma
 - Non scarring microenvironment
 - Protects damaged SC
- Ex-vivo expansion of SC**

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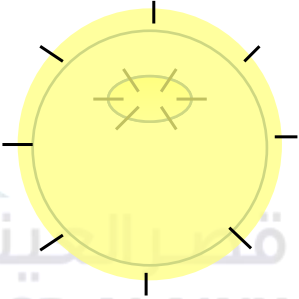
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- Overlay Graft (CL)**
 - Inf mediators in tears from stroma
 - Non scarring microenvironment
 - Protects damaged SC
- Ex-vivo expansion of SC**
 - ECM substrate
 - SC carrier

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AM in persistent corneal ulcers

- Filling
- Inlay Graft
- Overlay Patch (CL)





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Persistent ulcer

- Trauma ??
- Un-guided ttt for 1/12
- C/S (S.aureus) guided ttt 3/12
- Filling+Inlay grafts



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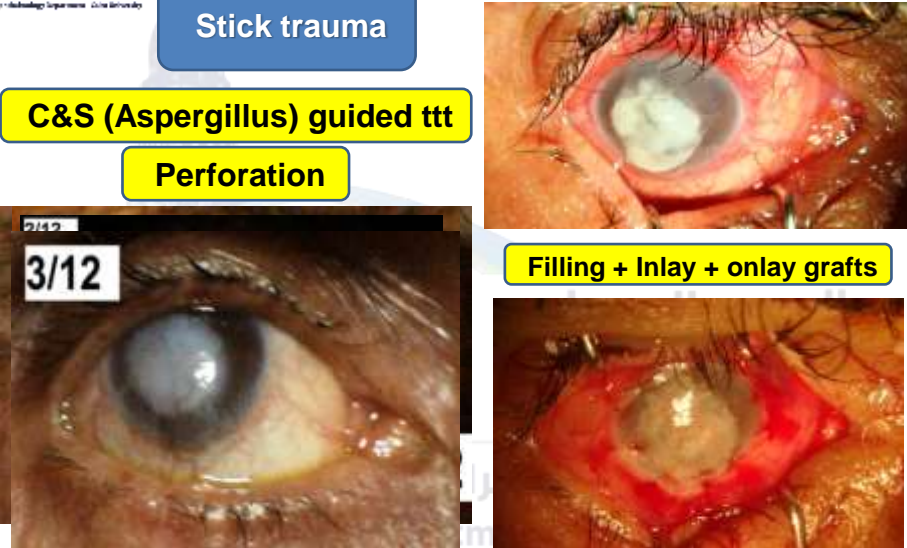
Perforated Fungal Ulcer

Stick trauma

C&S (Aspergillus) guided ttt

Perforation

Filling + Inlay + onlay grafts



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- Engineer 52 ys
- Heavy smoker
- Pain & DV for 2/52
- AB
- Progressive
- HM

Aetiology

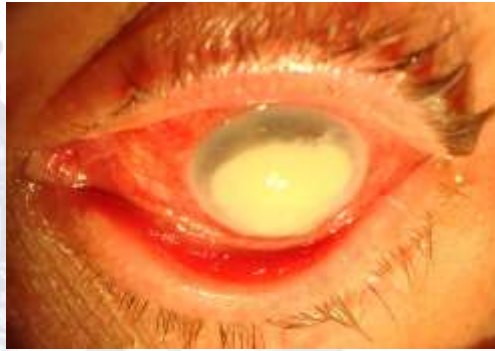
Viral infection
Bacterial infection
Fungal infection
Acanthameba
Non-infectious

Fusarium solani



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- Topical natamycin 5%
- Systemic vfid 200 mg bid

- Infection better
- Corneal melting

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Cross linking


AMT





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6 Ws **3 Ms**

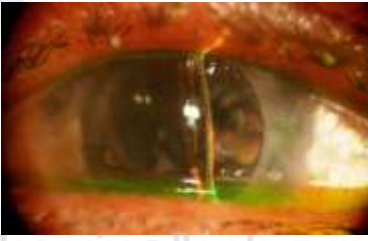

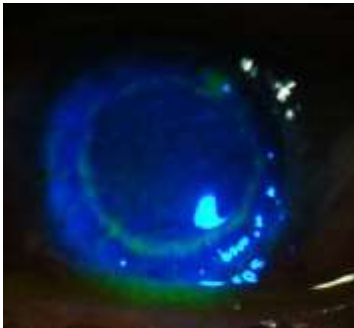


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Two weeks





Two months

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Three months

YAG capsulotomy

- 3/60
- 18 mmHg

One year

- 6/36
- 19 mmHg

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