Cornea

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1. **Donor Diabetes Mellitus Severity and Corneal Transplant Suitability in a US Eye Bank Donor Population.**
   - Rand GM, Polla DJ, Patel SH, Gore PK, Forest-Smith L, Livesay TM, Chuck RS.
   - Cornea. 2019 Oct;38(10):1203-1208.

   Interest Group: *Cornea specialists, Eye bankers*

   Comment: The study was designed to determine the effect of donor diabetes mellitus (DM) severity on endothelial cell density (ECD) and suitability of tissue for surgery.

2. **A Simple 60-Second Swelling Technique for More Consistent Ultrathin DSAEK Graft Preparation.**
   - Farbman NH, Y Li J, Ling J, Conwell C, Ramirez T.
   - Cornea. 2019 Oct;38(10):1209-1214.

   Interest Group: *Cornea specialists*

   Comment: This study describes & analyzes a simple and elegant new method to obtain “Ultra- Thin” tissue or Ultra Thin- DSAEK more consistently. It is a must read for cornea surgeons.

3. **Spatial Analysis of Corneal Densitometry, Thickness Profile, and Volume Distribution After Uneventful Descemet Membrane Endothelial Keratoplasty.**
   - Lazaridis A, Giallouros E, Sekundo W, Schroeder FM, Sklavos S, Droutsas K.
   - Cornea. 2019 Oct;38(10):1215-1221.

   Interest Group: *Cornea specialists*

   Comment: The authors evaluated endothelial cell density, corneal thickness and volume 24 months after uneventful DMEK surgery and compared with pseudophakic controls. They found similar corneal thickness and volume but higher Endothelial cell density in post DMEK patients compared to controls.

4. **Clinical Properties and Risk Factors for Descemet Membrane Folds After Deep Anterior Lamellar Keratoplasty in Patients With Keratoconus.**
   - Li X, Zhao Y, Chen H, Li Y, Hong J, Xu J.
   - Cornea. 2019 Oct;38(10):1222-1227.

   Interest Group: *Cornea specialists*

   Comment: The authors studied the clinical properties and risk factors for corneal Descemet membrane (DM) folds after deep anterior lamellar keratoplasty (DALK) in patients with keratoconus. They found that presence

of DM folds impaired postoperative corrected visual acuity and that the risk factors for DM folds included age older than 20.5 years and disease duration longer than 5.5 years. This article is a must read for cornea specialists.

5. **Clinical Outcomes of a New Asymmetric Intracorneal Ring Segment for the Treatment of Keratoconus.**
   - Vega-Estrada A, Chorro E, Sewelam A, Alio JL.
   - Cornea. 2019 Oct;38(10):1228-1232.

   Interest Group: *Cornea specialists, General Ophthalmologists, Refractive Surgeons*

   Comment: The authors studied the visual, refractive, and corneal aberrations after implantation of a new asymmetric intracorneal ring segment (ICRS). The found that the new ICRS improves vision and refraction and induces significant corneal flattening but the reduction in higher order aberrations was not significant. The extrusion rate was also high (6 out of 30 implantations).

6. **Combined Phototherapeutic Keratectomy, Intracorneal Ring Segment Implantation, and Corneal Collagen Cross-Linking in Keratoconus Management.**
   - Rocha G, Ibrahim T, Gulliver E, Lewis K.
   - Cornea. 2019 Oct;38(10):1233-1238.

   Interest Group: *Cornea specialists, General Ophthalmologists, Refractive Surgeons*

   Comment: The authors have evaluated the efficacy, predictability, and safety of combined corneal collagen cross-linking (CXL), intracorneal ring segment (ICRS) implantation, and superficial phototherapeutic keratectomy (PTK) in patients with keratoconus. They have concluded that combined procedure of ICRS implantation, CXL, and PTK is effective, predictable, and apparently safe for patients diagnosed with moderate keratoconus. However, I would like to put a note of caution here. This is a small study employing multiple modalities with a very short follow up of 6 months. Readers need to exercise caution while interpreting these results especially if they intend employing these procedures in their practice.

7. **Interferon Alpha-2b Eye Drops Prevent Recurrence of Pterygium After the Bare Sclera Technique: A Single-Center, Sequential, and Controlled Study.**
   - Yin M, Li H, Zhang Y, Dai H, Luo F, Pan Z.
   - Cornea. 2019 Oct;38(10):1239-1244.

   Interest Group: *Cornea specialists, Ocular Surface Specialists, General Ophthalmologists*

   Comment: This study investigated the efficacy and safety of interferon (IFN) alpha-2b eye drops in preventing pterygium recurrence after the bare sclera technique. It found

that the administration of IFN alpha-2b eye drops after the bare sclera technique reduced the recurrence rate to 7.4% over an 18 month period compared to 33.3% in the control group and appears to be safe and effective in reducing the recurrence of pterygium.

8. **Direct Visualization of Continuous Meibum Secretion From the Orifices of Meibomian Glands to the Tear Film.**
   - Cho BJ, Jee DH, Kim WJ, Shin MC, Kim EC, Kim MS, Hwang HS.
   - Cornea. 2019 Oct;38(10):1245-1252.

   Interest Group: *Cornea specialists, Ocular Surface Specialists, General Ophthalmologists*

   Comment: The authors present a new method to directly visualize meibum secretion on the tear film from meibomian gland orifices and show that meibum is continuously secreted between blinking.

9. **Corneal Subbasal Nerve Analysis Using In Vivo Confocal Microscopy in Patients With Dry Eye: Analysis and Clinical Correlations.**
   - Liu Y, Chou Y, Dong X, Liu Z, Jiang X, Hao R, Li X.
   - Cornea. 2019 Oct;38(10):1253-1258.

   Interest Group: *Cornea specialists*

   Comment: The authors studied corneal subbasal nerves and Langerhans cells (LCs) using in vivo confocal microscopy (IVCM) in patients with dry eyes.

10. **Effect of OTX-101, a Novel Nanomicellar Formulation of Cyclosporine A, on Corneal Staining in Patients With Keratoconjunctivitis Sicca: A Pooled Analysis of Phase 2b/3 and Phase 3 Studies.**
    - Malhotra R, Devries DK, Luchs J, Kabat A, Schechter BA, Shen Lee B, Shettle L, Smyth-Medina R, Ogundele A, Darby C, Bacharach J, Karpecki P.
    - Cornea. 2019 Oct;38(10):1259-1265.

    Interest Group: *Cornea specialists, Ocular Surface Specialists*

    Comment: In this pooled analysis, the authors evaluated total and central corneal fluorescein staining in patients receiving OTX-101 0.09% or vehicle in phase 2b/3 and 3 studies and whether improvements in corneal staining correlated with improved visual acuity. The fount that OTX-101 led to greater improvements versus vehicle in corneal surface staining as early as 4 weeks, and further improvements were seen up to 12 weeks. It was well tolerated in patients with keratoconjunctivitis sicca.

11. **Human Ocular Surface Particulate Composition in the Clinical Versus Home Environment.**
    - Kaplan C, Galor A, Blackwelder P, Hackam AS, Jeng BH, Menendez D, Kim SJ, Kumar N.
    - Cornea. 2019 Oct;38(10):1266-1272.

Interest Group: *Cornea specialists, Ocular Surface Specialists*

Comment: This research examined size, type (organic vs. inorganic), and elemental composition of particles recovered from the ocular surface in 2 environments and their associations with dry eye (DE) metrics.

12. Clinical Outcome of Autologous Cultivated Oral Mucosal Epithelial Transplantation in Ocular Surface Reconstruction.

- Gopakumar V, Agarwal S, Srinivasan B, Krishnakumar S, Krishnan UM, Iyer G.
- Cornea. 2019 Oct;38(10):1273-1279.

Interest Group: *Cornea specialists, Ocular Surface Specialists*

Comment: The authors evaluated the outcomes of autologous cultivated oral mucosal epithelial transplantation (COMET) in ocular surface reconstructive procedures in 25 eyes of 24 patients. They concluded that COMET, by providing an alternate source of epithelium, aids in faster epithelization and can be considered as an option in management of severe grade Chemical injury or Stevens-Johnson Syndrome in the acute stage as well as in fornix reconstructive procedures in chronic stage of ocular surface disorders. This study is a must read for Cornea and Ocular Surface Specialists.

13. Femtosecond Laser-Assisted Keratolimbal Allograft Transplantation for the Treatment of Total Limbal Stem Cell Deficiency.

- Qi X, Duan F, Li X, Zhang X, Li N, Liu M, Gao H..
- Cornea. 2019 Oct;38(10):280-1285.

Interest Group: *Cornea specialists, Ocular Surface Specialists*

Comment: This study evaluated the surgical procedure and therapeutic efficacy of femtosecond (FS) laser-assisted keratolimbal allograft (KLAL) transplantation in the treatment of eyes with total limbal stem cell deficiency. Good results were obtained. However, a controlled trial would be required to know how this procedure compares with other available procedures.

14. Limbal and Conjunctival Epithelial Thickness in Ocular Graft-Versus-Host Disease.

- Kheirkhah A, Coco G, Satitpitakul V, Pham TT, Dana R.
- Cornea. 2019 Oct;38(10):1286-1290.

Interest Group: *Cornea specialists, Ocular Surface Specialists*

Comment: The authors compared the thickness of the limbal epithelium and the bulbar conjunctival epithelium between patients with dry eye disease with and without ocular graft-versus-host disease and found that no difference exists in the thickness of the ocular surface epithelia between dry eyes with and without ocular GVHD.

15. Sex Disparity in How Pain Sensitivity Influences Dry Eye Symptoms.

- Li W, Lin MC.
- Cornea. 2019 Oct;38(10):1291-1298.

Interest Group: *General Ophthalmologists, Cornea specialists*

Comment: This study attempts to discern whether the association between pain sensitivity and dry eye symptoms varies between women and men. It found that the role of pain sensitivity on dry eye symptoms appears to vary between women and men. This difference provides insight into why women have a significantly higher dry eye disease prevalence than men.

16. Cornea Findings of Spectral Domain Anterior Segment Optical Coherence Tomography in Uveitic Eyes of Various Etiologies.

- Hashida N, Asao K, Maruyama K, Nishida K.
- Cornea. 2019 Oct;38(10):1299-1304.

Interest Group: *General Ophthalmologists*

Comment: The authors evaluated the morphologic appearance of keratic precipitates (KPs)
with spectral domain anterior segment optical coherence tomography (AS-OCT) for the diagnosis of uveitic eyes of various etiologies. AS-OCT images showed characteristic and specific morphological patterns. It is an interesting study. However, most of the information can also be obtained by a good slit lamp examination.

17. Ophthalmic Manifestations of Mycoplasma-Induced Rash and Mucositis.

- Shah PR, Williams AM, Pihlblad MS, Nischal KK.
- Cornea. 2019 Oct;38(10):1305-1308.

Interest Group: *Pediatric Ophthalmologists, General Ophthalmologists, Cornea Specialists, Ocular Surface Specialists*

Comment: This study evaluated the
Ophthalmic Manifestations of Mycoplasma-Induced Rash and Mucositis (MIRM) in 5 children. The authors recommend that pediatric ophthalmologists follow children who are hospitalized with MIRM as closely as those diagnosed with other mucocutaneous syndromes, such as Stevens-Johnson syndrome or toxic epidermal necrolysis.

18. Synergy Testing of Antiamoebic Agents for Acanthamoeba: Antagonistic Effect of Voriconazole.

- Talbott M, Cevallos V, Chen MC, Chin SA, Lalitha P, Seitzman GD, Lietman TM, Keenan JD.
- Cornea. 2019 Oct;38(10):1309-1313.

Interest Group: *Cornea specialists, General Ophthalmologists*

Comment: This study was designed to determine whether combinations of commonly used antiamoebic agents display synergy in their ability to

kill Acanthamoeba cysts in vitro. An important finding was that voriconazole reduced the cysticidal activity of 2 commonly used antiamoebic drugs, namely Chlorhexidine and propamidine, although the in vivo drug interactions could be different.

19. Patent Blue V as an Alternative Stain for DMEK Grafts: Safety, Stain Retention, and Feasibility.

- Chen SY, Tran KD, Wehrer S, Potts LB, Bauer AJ, Straiko MD, Terry MA.
- Cornea. 2019 Oct;38(10):1322-1327.

Interest Group: *Cornea specialists*

Comment: This study was conducted to determine whether Patent Blue V (PB) can be used as an alternative dye for staining Descemet membrane endothelial keratoplasty (DMEK) grafts. The performance of Patent Blue V was similar to Trypan blue and not better in any way. The authors concluded that PB is a viable alternative dye in DMEK grafts for applications where Trypan Blue may not be available or approved for use.

20. Ophthalmic Manifestation of Tsukamurella Species: A Case Series and First Report of Ocular Implant Infection After Enucleation.

- Leung KCP, Au SCL, Ko TCS.
- Cornea. 2019 Oct;38(10):1328-1331.

Interest Group: *Cornea specialists, General Ophthalmologists*

Comment: This study is a case series of Tsukamurella species associated ophthalmic manifestations. Tsukamurella is an important and emerging organism that causes opportunistic human infection.

21. Corneal and Scleral Problems Caused by Skin-Lightening Creams.

- Hollick EJ, Igwe C, Papamichael E, Gore DM, Angunawela RI, Philippidou M, Jones SM.
- Cornea. 2019 Oct;38(10):1332-1335.

Interest Group: *Cornea specialists, General Ophthalmologists*

Comment: This study is a case series of patients with corneal and scleral changes associated with the use of skin-lightening creams containing hydroquinone.

22. Technique for Ensuring Type I Bubble Formation for Pre-Descemet Endothelial Keratoplasty Preparation.

- Saint-Jean A, Soper M, Den Beste K, Iverson S, Price MO, Price FW.
- Cornea. 2019 Oct;38(10):1336-1338.

Interest Group: *Cornea specialists, Eye Bankers*

Comment: This study describes a technique (Soper technique) that ensures the production of a type 1 bubble when preparing pre-

Descemet endothelial keratoplasty (PDEK) grafts with a higher rate of predictability.