

# Abstracts

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## **Management of rhegmatogenous retinal detachment with coexistent macular hole in the era of internal limiting membrane peeling**

### **Am J Ophthalmology 2011**

Edwin et al reviewed outcomes of vitrectomy plus or minus scleral buckling for retinal detachment (RD) attributable to peripheral break(s) with noncausal macular hole, plus or minus internal limiting membrane (ILM) peeling. In this retrospective chart review forty-nine consecutive patients from March 1, 1998 to March 31, 2009 with RD attributable to peripheral break and macular hole were treated by vitrectomy. Five had no scleral buckle placed. Forty-three underwent ILM peeling. The main outcome measures were retinal reattachment, macular hole status, and vision. Final retinal reattachment rate was 95.9% (47/49) with 1 and 100% with 2 operations. Final macular hole closure rate was 39/43 with ILM peeling (90.7%), and 2/6 without (33.3%,  $P$  value = .0041). Mean final acuity was 20/120, and 20/100 if the macular hole was closed. The authors concluded that vitrectomy, plus or minus scleral buckle, with ILM peeling is effective for repair of RD with macular hole and ILM peeling can increase the rate of macular hole closure.

## **Oral mucosal graft with amniotic membrane transplantation for total limbal stem cell deficiency**

Liu J, Sheha H, Fu Y, Giegengack M, Tseng SCG

### **Am J Ophthalmology 2011; 152: 739-47.**

The authors have reported the results of oral mucosal graft for reconstruction of corneas with total limbal stem cell deficiency in this retrospective, interventional case series of seven patients (7 eyes) with total limbal stem cell deficiency caused by chemical burn (4 eyes), Stevens-Johnson syndrome / toxic epidermal necrolysis (1 eye), ocular cicatricial pemphigoid (1 eye), and multiple cryotherapies and application of mitomycin C for conjunctival melanoma (1 eye). Oral mucosal graft was transplanted as a surrogate limbus together with amniotic membrane transplantation with a follow-up of at least 8 months. Symptomatic relief, restoration of a stable epithelium, corneal

clarity, and the best-corrected visual acuity were assessed. Limbal stem cell deficiency was confirmed by impression cytology in all eyes, among which 6 were bilateral while 1 was unilateral. All 7 patients presented with severe loss of vision, photophobia, pain, chronic inflammation, and corneal vascularization and scarring. For  $30 \pm 19.8$  months, pain and photophobia were resolved in all 7 eyes; 6 eyes exhibited a stable epithelium with regressed corneal vascularization and reduced chronic inflammation. Visual acuity was improved in all 7 eyes. One eye developed partial limbal stem cell deficiency due to exposure at 47 months follow-up and was reoperated. Five eyes had peripheral corneal vascularization. Jingbo et al concluded that oral mucosal graft is a viable alternative for treating total limbal stem cell deficiency in eyes where transplantation of allogeneic limbal stem cells has failed or is not feasible.

## **Comparison of macular thickness measured by optical coherence tomography after deep anterior lamellar keratoplasty and penetrating keratoplasty**

### **Am J Ophthalmology 2011; 152: 756-61.**

Banu et al compared the postoperative macular thickness changes using optical coherence tomography (OCT) in eyes that underwent deep anterior lamellar keratoplasty (DALK) and penetrating keratoplasty (PKP) in this prospective, nonrandomized clinical trial. Sixty eyes of 60 patients (32 male, 28 female) with keratoconus who underwent corneal transplant surgery in an institutional setting were included in the study. Thirty eyes underwent DALK and 30 eyes underwent PKP. All eyes underwent corrected visual acuity (CVA) measurement and macular thickness measurement using spectral-domain OCT preoperatively, and 1 week, 1 month, 3 months, and 6 months postoperatively. The main outcome measures were CVA and macular thickness. The DALK group had significantly better mean CVA than that of the PKP group at 1-month ( $P < .001$ ), 3-month ( $P = .002$ ), and 6-month ( $P = .040$ ) follow-ups. The mean macular thickness significantly increased at 1 week after PKP surgery, remained stable at 1-month follow-up, and decreased at 3- and 6-month follow-ups. On the other hand, the mean macular thickness

remained stable during 6 months after DALK. Although there was no significant difference between groups preoperatively ( $P = .970$ ) and at 6-month follow-up ( $P = .339$ ), the PKP group had significantly higher mean macular thickness than that of the DALK group at 1-week ( $P < .001$ ), 1-month ( $P < .001$ ), and 3-

month ( $P = .005$ ) follow-ups. The authors concluded that although mean macular thickness increases and peaks around 1 month and returns back to normal levels at 6 months after PKP surgery, it does not change after DALK.