Abstracts

Edited By Dr. Qasim Lateef Chaudhry

Role of corneal collagen cross-linking in pseudophakic bullous keratopathy a clinico pathological study

Arora R, Manudhane A, Saran RK, Goyal J, Goyal G, Gupta D
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In this randomized, prospective, interventional study Ritu et al evaluated the clinical and histopathologic changes induced by collagen cross–linking (CXL) in twenty–four pseudophakic bullous keratopathy (PBK) patients. These patients with PBK underwent CXL followed by keratoplasty at 1 or 3 months. Twelve patients underwent penetrating keratoplasty 1 month after CXL (group A) and the remaining 12 patients underwent penetrating keratoplasty 3 months after CXL (group B). The main outcome measures were assessed at 1 week and 1 month for all patients and at 3 months for 12 patients only. The corneal buttons underwent histopathologic and immune fluorescence evaluation. The main outcome measures were visual acuity, ocular discomfort (tearing, redness, pain), corneal haze, central corneal thickness, histopathologic evaluation, and immune fluorescent microscopy. Mean visual acuity showed a significant improvement after CXL, from 1.925 - 0.173 before surgery to 1.75 - 0.296 at 1 month after surgery (P¼ 0.010), but deteriorated to 1.81 - 0.23 at 3 months. Symptomatic relief after CXL was at a maximum at 1 month, with a worsening trend at 3 months. Eighteen patients showed a reduction in corneal haze 1 month after CXL. The effect was maintained in 9 of 12 patients at 3 months. The mean central corneal thickness decreased significantly from 846.46 - 88.741 to 781.0 - 98.788 mm at 1 month (P<0.01) after CXL, but increased to 805.08-136.06mm at 3 months. Immunofluorescence microscopy revealed anterior stromal compaction in 7 of 12 patients (58.3%) in group A and in 5 of 12 patients (41.6%) in group B. Staining of keratocyte nuclei with 40, 6-diaminido-2-phenylindole dihydrochloride (Molecular Probes, Carlsband, CA) revealed a relative uniform distribution throughout the stroma.

The authors concluded that collagen cross– linking causes symptomatic relief and a decrease in central corneal thickness and anterior stromal compaction in PBK. However, the effect decreases with time and depends on disease severity.

Twenty – Four Hour Efficacy with Preservative Free Tafluprost Compared with Latanoprost in Patients with Primary Open Angle Glaucoma or Ocular Hypertension

Konstas AGP, Quaranta L, Katsanos A, Riva I, Tsai JC, Giannopoulos T, Voudouragkaki IC, Paschalinou E, Floriani I, Haidich AB
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Anastasios et al compared 24 h intraocular pressure (IOP) control obtained with preservative free (PF) tafluprost 0.0015% versus branded preservative containing latanoprost 0.005% administered as first choice monotherapy in patients with primary open angle glaucoma (POAG) or ocular hypertension (OHT) in this prospective, observer-masked, crossover study including consecutive newly diagnosed patients with POAG or OHT, and baseline IOP between 24 and 33mm Hg. Qualifying patients underwent baseline untreated 24 h IOP monitoring in habitual positions, with Goldmann tonometry at times 10:00, 14:00, 18:00 and 22:00, and Perkins supine tonometry at times 02:00 and 06:00. They were then randomised to either latanoprost or tafluprost, administered in the evening, for 3 months and then switched to the opposite therapy for another 3 months. 24 h monitoring was repeated at the end of each treatment period.

38 patients completed the study. Mean untreated 24 h IOP (24.9 mm Hg) was significantly reduced with both prostaglandins (p<0.001). Tafluprost demonstrated similar mean 24 h efficacy compared with latanoprost (17.8 vs 17.7 mm Hg; p=0.417). Latanoprost demonstrated significantly better 24 h trough IOP (15.9 vs 16.3 mm Hg; p=0.041) where as tafluprost provided significantly lower 24 h IOP fluctuation (3.2 vs 3.8 mm Hg; p=0.008). No significant difference existed between the two prostaglandins for any adverse event. The authors concluded that PF tafluprost achieved similar 24 h IOP reduction to branded latanoprost.

Spontaneous Vitreous Hemorrhage in Children

Sudhalkar A, Chhablani J, Jalali S, Mathai A, Pathengay A
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Aditya et al conducted this retrospective computer – assisted chart review study to determine the clinical profile, causes, and outcomes of ''spontaneous'' vitreous hemorrhage in children (<18 years). Charts of 124 eyes of 76 children who presented with non traumatic, non surgical vitreous hemorrhage between 2002 and 2012 were reviewed. All children underwent an appropriate ocular and systemic examination. Data collected included demographics, visual acuity, cause of ''spontaneous'' vitreous hemorrhage, ocular and systemic findings at presentation and at last follow-up, investigations, management details, and visual outcomes. The median age was 153.45 ± 56.19 months and there were 39 female and 37 male patients in this study. Forty-eight patients had bilateral vitreous hemorrhage. The most common presenting complaints were diminished vision (96.45%) and behavioral changes (87.24%).

The mean baseline BCVA in logMAR was 2.25 ± 1.11. The most common causes included vasculitis (34.6%) and hematologic disorders (27.4%). Patients were given medical therapy (topical and/or systemic) or underwent laser photocoagulation (29%) and/or surgery (55.6%). Twenty-nine eyes (23.3%) did not require any intervention. The mean number of surgeries was 1.89 ± 1.45 (range 1-4 surgeries). The mean final visual acuity was 0.76 ± 0.58 logMAR and was significantly better than the baseline (P <.001). The best anatomic and visual outcomes were seen in vasculitis, whereas congenital disorders such as retinoschisis had the worst.

The authors concluded that spontaneous pediatric vitreous hemorrhage has a diverse etiology, vasculitis being the most common cause in this series. A comprehensive evaluation (systemic and ocular) is required to ensure that vision and life-threatening conditions are not missed.

Persistent Outer Retinal Fluid Following Non-Posturing Surgery for Idiopathic Macular Hole

Rahman R, Oxley L, Stephenson J
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Rubina et al presented the anatomical and visual outcomes of patients with hypo-reflective cystic defects in outer fovea (outer foveal defect; OFD) in macular holes repaired with non-posturing vitrectomy and short term gas tamponade. This prospective consecutive case series study of 58 patients undergoing macular hole surgery also identified the incidence and risk factors for developing OFD. Two week post operative Optical coherence tomography (OCT) was done in all patients and OFD was measured. In these patients OCT was performed monthly until resolution of OFD. 27 eyes (46.6%) had an outer defect at 2 weeks, the presence of which was significantly associated with macular holes with larger base diameters preoperatively (p = 0.006). All defects closed spontaneously without further intervention, and the final vision was not affected by the presence of an OFD. Visual recovery was only slightly (and not significantly) delayed by the presence of an outer defect. In this first study of outcomes of OFDs following macular hole surgery in patients who did not posture postoperatively the authors concluded that OFDs are common but do not adversely affect visual outcomes.