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A new device for enlarging a small pupil during cataract surgery is described. The technique is safe and uses an instrument that will engage and stretch the iris sphincter.
EFFECTS OF COLLAGEN IMPLANTS IN THE REDUCTION OF HIGH ASTIGMATISM INDUCED BY PENETRATING KERATOPLASTY

Alejandro Espaillat, M.D., King To, M.D., Elliot Perlman, M.D.

Purpose: Evaluation of the insertion of collagen plugs (Eagle Vision, Memphis, TN) as spacers between corneal relaxing incisions in the correction of significant post penetrating keratoplasty residual astigmatism.

Methods: The inclusion criteria stated that patients be at least 21 years old, have a previous penetrating keratoplasty with at least five diopters of residual refractive astigmatism, and be free from any eye infection. A total of ten patients with unilateral high post keratoplasty astigmatism were selected. Five eyes were randomly assigned to a control group (Astigmatic keratectomy (AK) incisions without collagen implants), and five eyes to be experimental group (AK incisions with collagen implants).

Results: Postoperative corneal topography and visual acuity testing at one day, one month, two months, and six months after the procedure, showed decreased astigmatism in all the patients who had the relaxing incisions. The amount of astigmatism was significantly lower in the patients who received AK incisions with collagen implants. Minimal adverse effects were noted.

Conclusions: Implanting a biocompatible material into AK incisions for the correction of post penetrating keratoplasty astigmatism appears to be safe and may enhance astigmatism correction.

C-* (Research material provided by Eagle Vision, Memphis, TN)
Purpose: To determine the effect of arcuate limbal keratotomy on decreasing astigmatism during temporal clear cornea cataract extraction.

Methods: Seventy-two consecutive series of phacoemulsification patients with greater than 1.0 D of against-the-rule astigmatism were followed for a minimum of three months post operation. Patients having greater than 2.0 D of astigmatism had two 6 mm long arcuate keratotomies at the time of cataract surgery, one nasal and one temporal. Patients have 1.0 – 1.75 D had one arcuate keratotomy performed at the time of the cataract surgery.

Results: The absolute change in the amount of astigmatism was determined. The relative decrease in preoperative astigmatism from arcuate keratotomy will be discussed including the relative benefit of nasal arcuate keratotomy coupled with temporal arcuate keratotomy. Results demonstrated a more significant decrease in astigmatism via this route then anterior scleral tunnel incisions as previously presented by the third author.

Conclusion: A limbal arcuate keratotomy provides a safe and stable modality for correcting preoperative against-the-rule astigmatism.
Purpose: Topographic central islands are common after PRK and may contribute to poor patient satisfaction despite good-uncorrected and best-corrected visual acuity (BCVA).

Methods: Twenty-seven patients underwent PRK (Summit Apex) without pretreatment in their first eye and with pretreatment in their second eye. Mean spherical equivalent was –5.7D for the first eyes and –5.4D for the second eye. Corneal topography (Technomed C-Scan) and BCVA were compared one month post-PRK.

Results: Steep central island were seen in 93% of the first eyes but in only 14% of the pretreated second eyes. Mean BCVA (LogMAR) was 0.12 for the first eyes and 0.05 for the pretreated eyes.

Conclusion: Pretreatment is effective in reducing the incidence of steep central islands when using the Summit apex laser and may yield better BCVA compared to PRK without pretreatment.
ASSOCIATION BETWEEN OCULAR DOMINANCE AND THE PROPENSITY TO AMBLYOPIA

Anasthanios Zervos, M.D., Maha Ahmad, M.D., Dilip Thomas, M.D., D. Robbins Tien, M.D.

Purpose: To investigate whether ocular dominance is a strong predisposing factor in the development of amblyopia.

Methods: This was a retrospective study that included the review of 4135 pediatric and adult charts. We identified 312 cases with unilateral amblyopia of which 191 charts were selected having pure strabismic amblyopia. Of these cases 98, or 51%, were amblyopic in the left eye. Based on ocular dominance data, we would expect 65%, or 124 cases to be amblyopic in the left eye. The one sample test for a binomial proportion method was used for the statistical analysis.

Results: There is a statistically significant difference between the observed distribution of amblyopic eyes and the expected distribution, if ocular dominance is hypothesized to be a strongly associated factor for ocular suppression in amblyopia ($p<0.0001$).

Conclusions: Ocular dominance is not strongly associated and does not appear to be a predisposing factor in the pathogenesis of amblyopia.
EFFICACY OF MITROCIN C IN REPEAT DACRYOCYSTORHINOSTOMY

Lance Scott, M.D., Yoash Enzer, M.D.

Purpose: To determine the efficacy of intra-operative Mitomycin in repeat dacryocystorhinostomy (DCR).

Methods: Charts were reviewed of patients who had undergone either endoscopic or external DCR. Five eyes of four patients were found that had failed primary DCR and went on to have a repeat DCR (4 endoscopic and 1 external) with intra operative Mitomycin C. During surgery, a neuro-surgical cottonoid was soaked in Mitomycin C, 0.2 mg/ml, and placed at the osteotomy site for 3 minutes. On follow-up, dye disappearance tests, nasoendoscopic visualization of the osteotomy site, Jones I tests (endoscopic) and subjective reports from the patient were obtained and recorded. All surgeries were performed by the same surgeon.

Results: Four of five eyes (80%) had successful repeat DCRs with Mitomycin C as determined by positive dye disappearance tests, nasoscopic examination of the osteotomy site, a positive endoscopic Jones I test, and patient reports (average follow-up 6 months). One patient (20%) developed epiphora, had negative Jones I and dye disappearance tests and had evidence of adhesions and middle turbinate hypertrophy on endoscopic examination. This patient went on to have another DCR with Mitomycin C and is not asymptomatic for three months.

Conclusion: Prior studies have shown the success rate for repeat DCR to be 68% for endoscopic procedures and 85% for external procedures. In primary DCRs, intra operative Mitomycin C has shown to be more effective in maintaining larger osteotomy sites than traditional DCR. By using intraoperative Mitomycin, one may improve the success rate for repeat dacryocystorhinostomy.
CASE REPORT

Juancho Remulla, M.D.

A 65-year-old, HIV positive man with atypical pigmentary retinopathy.
PSEUDOTUMOR CEREBRI IN A CHILD

Patrick Hsueh, M.D., Robert Janigian, M.D., Marjorie Murphy, M.D.

Purpose: to describe a case of pseudotumor cerebri in a 10-year-old female with a post medical history of live transplantation and immunosuppression secondary to viral hepatitis.

Methods: Past medical history, onset, course, and outcome of the patient’s eye disease were analyzed.

Results: Findings and course were atypical but consistent with the diagnosis of pseudotumor cerebri. Carbonic anhydrase inhibitors and steroids successfully treated here symptoms.

Conclusion: Presentation of pseudotumor cerebri in children can differ from adults.