An improved surgical technique for pterygium excision with intraoperative application of Mitomycin-C

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A surgical technique was designed to improve safety pterygium excision with intraoperative application of mitomycin-C (MMC). A limbic incision was performed in 40 eyes. The body of the pterygium was dissected from the episclera to allow its excision. Care was taken to avoid excessive delamination and cauterization of tissues. A 0.02% MMC solution was then applied. Only at the end of the surgery was the head of the pterygium dissected from the cornea. The 8-0 absorbable sutures were used to place both edges of the conjunctiva together to completely cover the area of bare sclera. After a mean follow-up time of 12 months, a recurrence rate of 5% was observed. No complications of therapy were observed. This is a logical alternative to other surgical techniques. However, randomized studies with more patients and longer follow-up are necessary to determine the potential of this procedure in improving the safety of pterygium excision with intraoperative MMC.

Laser in situ keratomileusis to correct refractive errors after keratoplasty

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Purpose: To assess the safety and effectiveness of excimer laser in situ keratomileusis (LASIK) to correct refractive myopia, astigmatism, or both after keratoplasty.

Setting: Eye Clinic Day Hospital, São Paulo, Brazil.

Methods: Twenty-two eyes that had previously had corneal transplantation were studies. Laser in situ keratomileusis was performed using the Chiron automated microkeratome and the VISX Twenty-Twenty B excimer laser.

Results: Mean follow-up after LASIK was 10.09 months ± 3.87 (SD). The spherical equivalent refraction dropped from -4.55 ± 3.66 D before LASIK to -0.67 ± 1.24 D after surgery. At the last examination, 72.7% of patients had a refractive error within ± 1.00 D of emmetropia and 54.5% had uncorrected visual acuity of 20/40 of better. Vector analysis of astigmatic correction showed an index of success of 54.0%. Best spectacle-corrected visual acuity was unchanged in 8 cases, improved in 9, and decreased in 5. Significant endothelial cell loss, keratoplasty wound dehiscence, and other serious complications did not develop in any eye.

Conclusion: The correction of refractive error with LASIK in postkeratoplasty patients proved to be safe, effective, and predictable. Further studies with longer follow-up are needed to determine the method's clinical value.

ANÚNCIO

Ensaio Fotográfico "Oculosporidiosis"

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Jacob Cohen, Ricardo Chaves Carvalho, Ricardo Guimarães, Antônio Augusto Velasco e Cruz

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Confocal microscopy in Bowman and stromal corneal dystrophies

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Objective: To use confocal microscopy to demonstrate the similarity among three autosomal-dominant corneal dystrophies and the diversity of the deposit patterns within a single dystrophy.

Design: A prospective, comparative case series.

Participants: Twenty patients (40 eyes) from 10 families suffering from Bowman or stromal dystrophy agreed to take part: 3 with Reis-Bückler dystrophy, 12 with granular dystrophy, and 5 with lattice type-I dystrophy. Of these, nine had recurrence in their grafts or after phototherapeutic keratectomy before the confocal examination. The confocal images of affected corneas were compared with those of ten normal control eyes (ten subjects).

Intervention: All patients were examined by slit-lamp biomicroscopy. Confocal microscopy was performed with Achroplan 40x/numeric aperture (NA)= 0.75 and 63x/NA= 0.9 water immersion objectives. Image analysis was used to identify the corneal epithelial and stromal deposits correlated with each disorder.

Main Outcomes Measures: Selected images of the corneal layers were evaluated qualitatively for the size, shape, light scattering, and reflection of the deposits.

Results: Slit-lamp biomicroscopy showed stromal involvement in all affected eyes. Confocal microscopy identified epithelial deposits in 30% of the eyes and stromal deposits in all eyes. The deposits within the epithelium were revealed more clearly with the 63x/NA= 0.9 objective (higher numeric aperture). Some of the confocal findings near the Bowman layer were common for all three dystrophies. Normal control eyes showed no epithelial or stromal deposits, either by biomicroscopy or confocal microscopy.

Conclusions: Confocal microscopy provides an in vivo evaluation of the deposits in the cornea, with a higher resolution than biomicroscopy. The confocal findings common to the three dystrophies may agree with previous hypotheses of the same genetic origin. It may be a useful adjunct to slit-lamp biomicroscopy, particularly when histopathologic studies cannot be performed.