



# JCRS Highlights

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by Thomas Kohnen

## Endophthalmitis - more support for intracameral prophylaxis

Endophthalmitis continues to be a rare but serious complication of cataract surgery. The ESCRS endophthalmitis study published preliminary results in 2006 showing a near five-fold decrease in the rates of postoperative endophthalmitis with the use of intracameral cefuroxime. Nonetheless, a significant percentage of surgeons, particularly in the United States, have been slow to adopt this approach to prophylaxis. A new study by Dr García-Sáenz and colleagues provides further support for intracameral cefuroxime. They report an infectious endophthalmitis rate of 0.043 per cent (95 per cent confidence interval [CI], 0.02 per cent to 0.06 per cent) from October 2005 to December 2008 with intracameral cefuroxime compared with a rate of 0.59 per cent without cefuroxime, in line with the ESCRS multicentre study findings. As Dr Emanuel Rosen notes in an editorial, the efficacy of intracameral cefuroxime as a prophylactic measure against infectious endophthalmitis is now well established. However, it is not perfect. It has limited efficacy against

Gram-negative bacteria. Practical issues continue to limit its use – it is not available in prepackaged form for intracameral use; and it has to be diluted from concentrate in the operating room, giving scope for errors in dilution and contamination.

*E Rosen, JCRS, "Endophthalmitis", Volume 36, Issue 2, Pages 191-192.*

*M García-Sáenz et al., JCRS, "Effectiveness of intracameral cefuroxime in preventing endophthalmitis after cataract surgery: Ten-year comparative study", Volume 36, Issue 2, Pages 203-207*

## Safety of manual small-incision cataract surgery

Manual small-incision cataract surgery (SICS) is gaining adherents in areas where the cost or availability of phacoemulsification cataract surgery may be problematic. Is manual SICS more harmful to the endothelium than phacoemulsification? Researchers in India compared the effects of both procedures on endothelial cell counts. Their randomised study evaluated 200 patients, 100 in each group. The mean preoperative ECC by the

manual counting method was 2950.7 cells/mm<sup>2</sup> in the phacoemulsification group and 2852.5 cells/mm<sup>2</sup> in the SICS group and by the automated counting method, 3053.7 cells/mm<sup>2</sup> and 2975.3 cells/mm<sup>2</sup>, respectively. The difference at six weeks was 543.4 cells/mm<sup>2</sup> and 505.9 cells/mm<sup>2</sup>, respectively, by the manual method (P = .44) and 474.2 cells/mm<sup>2</sup> and 456.1 cells/mm<sup>2</sup>, respectively, by the automated method (P = .98). The corrected distance visual acuity at six weeks was better than 6/18 in 98.5 per cent of eyes in the phacoemulsification group and 97.3 per cent of eyes in the SICS group. These results indicate that manual SICS is as safe for the corneal endothelium as phacoemulsification, is almost as effective, and is much more economical. This confirms that SICS can be an alternative to phacoemulsification in areas in which phacoemulsification is not available.

*P Gogate et al., JCRS, "Comparison of endothelial cell loss after cataract surgery: Phacoemulsification versus manual small-incision cataract surgery: Six-week results of a randomized control trial", Volume 36, Issue 2, Pages 247-253.*

## Paediatric LASEK

Once a taboo, refractive laser surgery is finding a place in the treatment of paediatric patients. Canadian researchers reviewed a series of cases to assess the refractive, visual acuity, and binocular results of laser-assisted subepithelial keratectomy (LASEK) in children with bilateral hyperopia or hyperopic anisometropic amblyopia. The review included 72 eyes of 47 hyperopic patients (0.00 to +12.50 D), ranging in age from 10 months to 17 years. One year after treatment, 41.7 per cent of eyes had improved corrected distance visual acuity. The mean anisometropic difference in the hyperopic anisometropic amblyopia subgroup (18 eyes) improved from 4.39 D preoperatively to +0.51 D at one year.

*W Astle et al., JCRS, "Laser-assisted subepithelial keratectomy for bilateral hyperopia and hyperopic anisometropic amblyopia in children: One-year outcomes", Volume 36, Issue 2, Pages 260-267.*

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