

Study sets optimal time for spectacle prescription after cataract surgery

**Dermot McGrath
in Rome**

SPECTACLES can safely be prescribed eight days after uncomplicated cataract surgery in the majority of patients, according to a British study to be presented at the 9th Winter Refractive Surgery meeting of the ESCRS.

Damian Lake MRCOphth said that the findings were particularly significant in light of the fact that more optometrists are becoming involved in the post operative care of patients in the United Kingdom.

included 30 consecutive patients who underwent clear corneal temporal incision phacoemulsification cataract extraction with implantation of an acrylic intraocular lens in the capsular bag through an enlarged 3.1 mm incision by one surgeon.

Postoperatively, eyes were treated with Maxitrol eye drops four times daily tapered over four weeks. Patients were examined independently at day one, day eight and every seven days until the subjective refraction was within 0.25 D for both sphere and cylinder and within 10 degrees

preoperative keratometry was 43.8 D with a mean cylinder of 1.11 D at 90.6 degrees.

One day after surgery, the mean keratometry was 43.775 D and mean cylinder was -0.18 D at a mean axis of 95.06 degrees. The subjective refraction demonstrated a mean spherical

sphere and cylinder, and an axis within 10 degrees of the day eight subjective refraction. The mean keratometry was 43.227 D with a mean cylinder of -0.36 D and axis of 91.72 degrees. The mean spherical equivalent at day 15 was -0.068 D. No patients required further follow up beyond the day 15-time point.

For the 11 patients that had not achieved stability by day eight, the mean change in spherical equivalent demonstrated between day one and day eight-post phacoemulsification was -0.23 D, ranging from -1.625 D to 1.125 D. All 11 patients stabilised by day 15 with a mean change of spherical equivalent -0.07 D, ranging from -0.375 D to 0.125 D between day eight and 15.

Patients were excluded from the protocol if they had non-phacoemulsification cataract surgery, suture placement at the time of surgery, or other significant pathology that could limit vision postoperatively such as ocular surface disease, advanced glaucoma, and retinal disease. If patients were not able to attend regular concentrated follow up for any reason they were also excluded.

Preoperative evaluations included keratometry, laser partial coherence interferometry, biometry, and refraction, slit lamp anterior segment examination and dilated fundus examination. The refractive target ranged between 0.5 D and -1.5 D, noted Dr Lake. Intraocular lens powers were calculated with the SRK T formula using a surgeon specific A-constant.

Surgery was performed under peribulbar anaesthesia administered by a consultant anaesthetist. Clear corneal incisions were created temporally



Damian Lake

with a 2.75 mm microkeratome and the anterior chamber deepened with a viscoelastic agent. A 5mm diameter continuous curvilinear capsulorhexis was created, the nucleus hydrodissected, sculpted in the capsular bag and removed with a bimanual cracking technique.

After cortical material had been aspirated and the capsular bag expanded with a viscoelastic, an Acrysof MA60BM lens was placed in the bag through an enlarged 3.1 mm corneal wound. The viscoelastic was then aspirated and the anterior chamber deepened with balanced salt solution, but no corneal sutures were placed. A subconjunctival injection of betnesol and cefuroxime was administered. All wounds were self-sealing, with no stromal hydration.

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equivalent of -0.35 D.

Refraction stable in most eyes at eight days

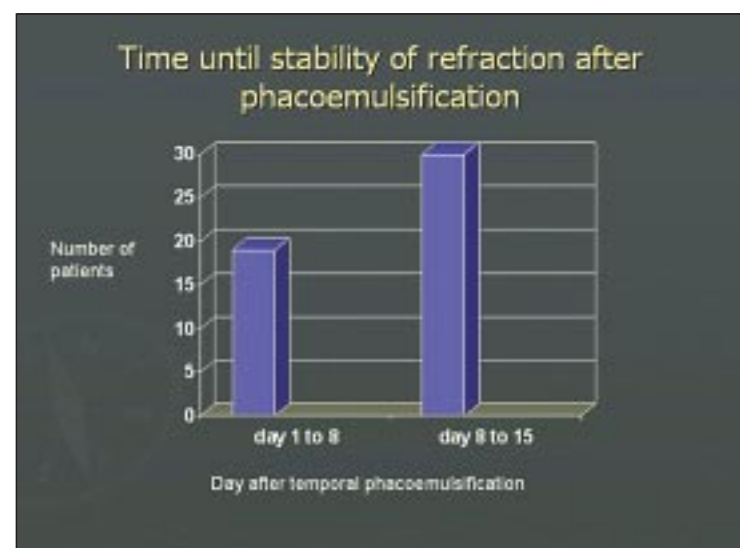
At eight days after cataract surgery 63.3% (19 out of 30 patients) had a best spectacle corrected vision within 0.25 D sphere and cylinder. Axis change was less than 10 degrees from the subjective refraction at day one after cataract surgery. The mean keratometry at day 8 was 43.56 D with a mean cylinder of 0.25 D and a mean axis of 92.1 degrees.

The subjective refraction produced a mean spherical equivalent of -0.054 D.

At 15 days post-op, the remaining 11 patients' subjective refractions were within 0.25 D

axis measurement on two consecutive visits. Uncorrected and best-corrected visual acuity, autorefraction, keratometry and subjective refraction were recorded at each visit.

All 30 patients were available for follow-up examinations. The mean age at the time of surgery was 68.3, ranging from 58 to 88 years. Two-thirds of the group were women. The mean



Courtesy of Damian Lake

“We have seen a clear trend towards greater involvement of optometrists in the cataract patient care pathway and postoperative review. Optometrists will wish to combine the post operative visit with spectacle prescription and this study helps them to identify the optimal time-frame to accomplish this,” he said.

Dr Lake's prospective study