First day follow up for routine phacoemulsification?

L Whitefield, J Crowston, B C Little

Abstract

Aims—To determine the postoperative morbidity on day 1 after uncomplicated phacoemulsification.

Methods—A prospective study was performed on 100 otherwise healthy eyes after uncomplicated phacoemulsification and lens implant. Patients were examined on the first postoperative day and any deviation from a set postoperative protocol was recorded.

Results—Transient intraocular pressure rises of 30 mm Hg or greater were seen in three eyes. These all settled after a single dose of oral acetazolamide 250 mg.

Conclusions—The results of this study reinforce the clinical impression that the need for day 1 routine follow up in this selected group of patients is questionable and probably unnecessary.


With the advent of small incision modern microsurgical techniques, day-case cataract surgery has become increasingly popular. Economic forces dictate an increasing demand for day-case surgery.1

In many ophthalmic units in the UK, patients are reviewed routinely in the hospital the day after day-case cataract surgery. In contrast with other authors,2 3 our experience is that many patients decline day-case surgery owing to difficulties in attending hospital the next day. Reasons commonly include inadequate transport facilities, difficulty parking in inner cities, distance from hospital, reliance on friends and relatives. The population group requiring cataract surgery is frequently affected by these problems and this results in a lower rate of day-case surgery.

Patients and methods

Patients were recruited to this prospective study following uncomplicated phacoemulsification surgery between January and March 1995. We analysed the results from the first 100 patients.

Patients were excluded on the following grounds:

1. Prooperative exclusions—ocular hypertension, glaucoma, uveitis, small pupil, trauma.

2. Complications of local anaesthesia—retrobulbar haemorrhage, suspected globe perforation.

3. Operative exclusions—poor wound construction, incomplete capsulorhexis, iris trauma, posterior capsule rupture, vitreous loss, or dislocation of nucleus or nuclear fragments into vitreous cavity.

Ten surgeons participated in the study and ranged in experience from senior house officer to consultant. Operations were performed under local or general anaesthetic.

SURGICAL METHOD

Corneal or scleral tunnel incisions were fashioned. Continuous curvilinear capsulorhexis was performed using viscoelastic material (Healon, Healon GV, or HPMC). The lens nucleus was mobilised using balanced salt solution and blunt hydrodissection cannula. Phacoemulsification using a Storz Premier phacoemulsifier with either divide and conquer, chip and flip, or phacochop techniques. Soft lens matter was aspirated using automated irrigation aspiration. Foldable 6/5 mm optic silicone Starr lenses or single piece 5 mm poly(methylmethacrylate) (Alcon) phacoemulsification lenses were inserted using viscoelastic material through 3 mm or 5 mm incisions respectively. Viscoelastic material was aspirated. Sutures were employed when a water tight section could not be demonstrated after inflation of the anterior chamber. Cefuroxime 100 mg and betamethasone 4 mg were injected into the subconjunctival space at the conclusion of surgery. A pad and Cartella shield were then placed over the eye. No ocular antihypertensive agents were used.

FOLLOW UP

All patients were examined in the morning of the first postoperative day after removal of dressing and cleaning the eye. Unaided and pinhole Snellen visual acuities were measured. If the best corrected acuity was less than 6/12, dilated fundus examination was performed and the cause of visual deficit noted.

Intraocular pressure by Goldmann applanation tonometry was recorded. Wound integrity, anterior chamber activity, and lens position were also noted.

Our set postoperative protocol was neomycin, polymyxin B, and dexamethazone eyedrops (Maxitrol) four times daily. Any deviation from this was recorded. An outpatient appointment was made for 1 week later.

INTERVENTION CRITERIA

The following intervention criteria were established at the start of the study.

1. To treat an intraocular pressure of 30 mm Hg or greater.
Results

One hundred operations were performed by four grades of surgeon (Table 1); 14 were under general anaesthetic and 86 were under local anaesthetic. Scleral tunnels were employed in 45 patients, and 55 had clear corneal three step incisions. Sutureless surgery was possible in 84 cases, 16 required a single 10/0 nylon cross stitch or infinity suture. Ninety four patients received non-foldable lenses and six had foldable lenses.

Visual acuity ranged from 6/4 to hand movements (Fig 1 and Table 2). Seventy four patients achieved vision of 6/12 or better. Causes of reduced vision in the remaining patients are shown in Table 3.

There were three interventions, all for patients with intraocular pressures greater or equal to 30 mm Hg (30, 34, and 36 mm Hg). These patients also had corneal oedema. They were treated with a single dose of oral acetazolamide 250 mg. All had normal intraocular pressures and clear cornea at examination 24 hours later. No further treatment was required.

The remaining 97 patients had no other significant complications requiring deviation from the set postoperative protocol regimen of neomycin, polymyxin B2, and dexamethasone eyedrops four times daily.

Discussion

There are many reasons why surgeons like seeing their cases on the first postoperative day. For example:

1. Detection of complications and intervention if necessary.

(2) To consider suture or resuture in any patient with wound leak.

(3) To repair iris prolapse surgically.

(4) To reposition dislocated intraocular lens.

(5) To treat fibrinous uveitis.

(6) To treat endophthalmitis

Discussion

There are many reasons why surgeons like seeing their cases on the first postoperative day. For example:

1. Detection of complications and intervention if necessary.
routine prophylaxis for raised intraocular pressure. In this way it would be possible in our unit to increase significantly the number of patients suitable for day-case care, without compromising the standard of patient care.

The authors have no financial interest in any products mentioned in this paper.

6 Robin AL. Effect of topical apraclonidine on the frequency of intraocular pressure elevation after combined extracapsular cataract extraction and trabeculectomy. Ophthalmology 1993; 100: 628-33.