
Editorial

Paediatric cataract surgery

Although the popular image of ophthalmic surgery is that of a specialty in which procedures of great refinement and delicacy are carried out by virtuoso surgeons, many of our older operative techniques did not justify this image. In particular, the techniques which were formerly employed for the removal of congenital cataracts left much to be desired. In one version a needle was plunged into the lens, the only proviso being that complete transfixion was best avoided. During the course of the next few days the lens would further opacify and would also swell, with a considerable likelihood of secondary glaucoma. About one week after the initial needling, especially if glaucoma occurred, a keratome or small Graefe knife section would be made and an anterior chamber washout performed with varying degrees of efficacy – but always by a positive pressure technique without aspiration.

There were certain variations of this technique depending on the nature of the cataract. Quite frequently the second operation was omitted and the lens matter was allowed to become absorbed spontaneously. Later capsulotomy was usually required. Sometimes removal of lens matter was effected by 'curette evacuation', whereby a narrow elongated spoon was passed through the section into the pultaceous lens matter, which was then milked out of the eye by rubbing another curette or an iris repositor on the corneal surface, so that the lens matter was squeezed along the curette and out of the eye.

Subluxated lenses were looked at askance, and most surgeons tried to avoid getting involved. The prospect of massive vitreous loss without the benefit of adequate vitrectomy equipment (which had not yet been invented) was enough to deter most surgeons except the most adventurous, and the results of such surgery tended to be poor. Some good results were obtained, but the incidence of later complications, especially retinal detachment, was high. Anterior synechiae of lens capsule, iris, and even strands of vitreous were not uncommon and no doubt contributed to the poor prognosis.

Over the last few years the situation has changed dramatic-

ally, as illustrated by the paper in this month's issue by Hing and colleagues. Several reasons for the improvement can be given. The use of the surgical microscope is certainly one, the concept of simultaneous irrigation and aspiration is another, and the use of vitrectomy instruments is a third.

These advances have taken place within the clinical lifetime of most senior surgeons. I well remember, when visiting the Wilmer Institute in 1964, seeing David Paton, the then senior resident, doing what he called a 'push-pull' extraction on a congenital cataract. This was the method which foreshadowed the technique of simultaneous aspiration and infusion which is now the standard way of removing lens matter. Since appropriately fine tubing and cannulae were not available, the next best thing was to fill a hypodermic syringe with a suitable irrigating solution, fit a small needle, and, after introducing it into the eye, remove the lens matter by alternating suction and injection. The contents of the anterior chamber were gradually mixed with the contents of the syringe, and thus the lens matter was effectively diluted to the point where, after one or two changes of fluid in the syringe, it was virtually all eliminated. The worst feature of the operation from the surgeon's point of view was the surprisingly painful state of his or her metacarpophalangeal thumb joint after a 20-minute session of push-pull.

The incidence of retinal detachment cited in the 10-year series described in the present paper is only about 2.50%, a most creditable figure and surely due to the improved techniques. One notes in particular the lack of problems in the cases of lensectomy for ectopia lentis – a dramatic improvement on former times and almost certainly due to the better surgical techniques reducing the incidence of vitreous traction.

But problems still remain with these unfortunate children, the most obvious being amblyopia, and one feels that there must be an irreducible minimum incidence of this. Correction of the aphakia causes some controversy, and no doubt the experts in this field will continue to argue the merits of contact lenses versus intraocular implants. And, who knows, epikeratophakia may eventually also play a part.

REDMOND SMITH