

Editorial: Cataract surgery—the late arrival of science

This issue of the journal makes welcome history, containing as it does a paper which seeks to reintroduce scientific method to an investigation into techniques employed used in the treatment of cataract. Hung Cheng and his coworkers in the Oxford Cataract Treatment and Evaluation Team (OCTET) report on their initial findings on the first randomised controlled study successfully undertaken and completed since the intraocular lens was first devised.

The fact that we have had to wait so long reflects the fact that surgical treatment has too seldom been subjected to controlled investigation. Instead we have been inundated with streams of reports of series—large and small—consecutive and otherwise—which do no more than reflect the manual dexterity or honesty of the surgical reporter. Such accounts are of little benefit to other surgeons and can seldom be applied meaningfully to other groups of patients, even when they are nationally collated.

The use of scientific method for the investigation into the place of a new form of treatment requires at least (1) a prospective study; (2) randomised selection of similar patients for the various forms of treatment to be compared; (3) no loss to follow-up for the duration of the study and no exclusion from the trial of patients already admitted and who had correctly met the original criteria for entry; (4) separate treatment and evaluation teams of clinicians; and (5) rigid adherence to the original protocol.

The requirement for an investigation to be blind is almost impossible to achieve in a study of surgical method.

In their study the OCTET have met all the possible requirements. Informed patients were randomly allocated to three different forms of cataract management, each perfectly valid at the time of the start of the programme. Popular opinion and fashion in treatment techniques for cataract and lens style changed dramatically during the course of the study, but the principles above were appropriately con-

sidered more important to pursue than all others and for the ultimate benefit of us all.

The Oxford team, therefore, are to be congratulated for their integrity and persistence, and we can welcome the news that the clinical decisions made over the changing years can now be regarded as scientifically correct and appropriate. The fact that the three surgical methods compared in their trial have now all been widely abandoned makes little difference to the value of the results achieved. The surgical steps tested here are ones made by many of us as practising surgeons, and it is comforting to know that our decisions made then on grounds of instinct or personal persuasion were sound. It is reasonable to assume, as the authors suggest, that further decisions made later, particularly concerning the now widespread use of intraocular lenses supported entirely within the posterior chamber, will be equally valid.

Similarly, the rigid control of this trial has precluded not only the newer styles of implant lenses and fixation methods but also the use of viscoelastic fluids used to protect the corneal endothelium. These fluids have done much to reduce the cell loss previously associated with modern methods of extracapsular extraction and highlighted in this paper.

The factors which make this trial so useful, randomisation, the inclusion of a control group, no loss of follow-up, and separate teams for patient management and assessment of results, require determination to pursue, maintain, and administer. Sadly, it is unlikely that this report will herald a new era, for the same reasons. Public opinion has now been so well manipulated by indirect advertising in the lay press that the chances of finding a sizable population of patients willing to undergo control surgery rather than have the 'benefit' of the latest developments are remote. Had the early advocates of intraocular lenses adopted such criteria and methods when the climate for such investigations was more favourable, their cause might have been advanced sooner than was the case.

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