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Editorials

Expanding the role of vitrectomy in retinal reattachment surgery

The paper by Gartry *et al* in this issue, reporting their experience using vitrectomy techniques in the management of retinal detachments uncomplicated by fibrocellular or fibrovascular proliferation, giant tears, or macular breaks, is both sensible and timely. Increasing familiarity with these methods has effectively moved the goalposts of conventional surgery for retinal detachment, by enabling a rational approach to and readily achievable goals in cases complicated by poor visibility or obscure and/or awkward retinal breaks. However, the pioneering studies of Lincoff and Gieser¹ in finding retinal holes, and Norton² and others^{3,4} in identifying better methods of achieving internal tamponade, go a long way towards overcoming many of the problems presented by these cases, without recourse to vitrectomy. Where then do we draw the dividing line between the use of vitrectomy and conventional methods in our management of retinal detachments?

Vitrectomy, as Gartry *et al* make clear, confers very considerable benefits in terms of providing control over the intraocular environment throughout surgery, facilitating where necessary internal search for retinal breaks,⁵ and achieving effective long term internal tamponade. Moreover, internal drainage of subretinal fluid through pre-existing retinal breaks can be accomplished with the minimum of risk, although the deliberate creation of a retinotomy for this purpose, as described by these authors, is eschewed by many surgeons, in favour of a posterior, monitored, external approach.⁶ 'On the downside', as our American colleagues would say, intraocular microsurgery introduces the possibility of serious complications, such as iatrogenic damage to the lens and retina, not to mention the difficulty of maintaining break closure in the absence of the vitreous gel, while some authors⁷ have even suggested that vitrectomy itself predisposes to the development of proliferative vitreoretinopathy.

The results reported by Gartry and co-workers are as good as those one might expect from primary surgery for retinal detachment in so-called 'simple' cases – that is, those in which no difficulty is anticipated in identifying and/or closing all the retinal breaks. The flaw, inherent in any retrospective study, lies in its failure to address the question of late complications, notably cataract, occurring as a direct result of uncomplicated vitrectomy or, as seems likely in a small number of the cases reported here, as a consequence of using silicone oil after failure of the initial operation. Whatever the final outcome in these difficult cases, and the results of surgery in the series reported here are remarkably consistent throughout all subgroups, it is the primary success rate which is of overriding importance, signifying as it does the costs to the patient, in terms of severity and duration of

morbidity, and to the surgical services in terms of resources.

It may be true that 'conventional' surgery would have resulted in a much higher failure rate at the first operation, leading to a greater use of vitrectomy methods and/or the employment of silicone oil at subsequent attempts to reattach the retina, but we cannot be absolutely certain about this from the data provided. The only way to prove that vitrectomy carries a significant long term advantage over other methods is by a controlled, randomised, prospective study, comparing the outcome in properly matched groups and with meticulous attention to surgical methods. The remit of such a trial could be extended to evaluate the importance of scleral buckling in association with primary vitrectomy for retinal detachment, a matter of concern, because of the morbidity and increased operating time associated with its use. Figures presented in the paper of Gartry *et al* suggest that scleral buckles may not be necessary in many of these cases, if meticulous removal of the vitreous gel is undertaken before internal gas tamponade, but are rendered invalid by the bias of case selection.

A sufficient number of patients with primary retinal detachments needs to be recruited to generate a large enough sample of cases in which there is no conceivable reason for the operating surgeon to prefer one method to the other. Furthermore, it is not acceptable simply to record anatomical and visual status at 6 months after surgery, because of the increasing incidence of lens changes in vitrectomised eyes, and methods and equipment are needed to take this into account.

Clear guidelines to enable us to choose between vitrectomy and conventional surgery in patients with retinal detachments in which the breaks are hard to identify, and/or there is reason to believe that they will be difficult to close, will be greatly to the benefit of patients and surgeons alike.

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