

Newsdesk

Transplantation as a therapy for retinitis pigmentosa?

Considerable excitement and surprise has attended reports given at several recent international meetings by Professor Manuel del Cerro from the University of Rochester on a series of patients who received transplants of fetal retina as a treatment for retinitis pigmentosa (*Soc Neurosci Abstracts* 1996;22:319). Some of these patients appeared to show improved vision. Given the gloomy prognosis at present for patients with retinal degenerative diseases, this is good news. This work developed from a series of laboratory studies conducted over the past 25 years in which cells have been transplanted to the central nervous system, as a potential treatment for certain neurodegenerative diseases. About 12 years ago, several groups began transplantation studies in animal models of retinal degeneration. Two separate situations were suggested, either transplanted photoreceptors could take the place of photoreceptors that had already degenerated, forming new connections with the rest of the retina to restore vision, or they could protect remaining photoreceptors, especially cones, from further damage. Experimental studies have yet to show whether if new connections do occur they can restore normal visual function. The possibility of cone protection has yet to be validated.

It is with this background that the first clinical experiments have been conducted in retinitis pigmentosa patients. So far, evidence of improvement is anecdotal; no careful objective tests using third party observers have yet been reported. No control studies have yet been undertaken and while these are a controversial aspect to any clinical experiment, they are nevertheless essential for proper evaluation. It is hoped that these issues will be addressed once the work is presented in a peer reviewed article.

Clearly it is simply too early at this point to be able to recommend transplantation as a treatment. While it always seems churlish to argue for caution when the potential for a cure is offered, it has to be remembered that many treatments that had seemed effective (for example, the Cuban treatment) have not survived careful scrutiny (*Arch Ophthalmol* 1996;114:560-3 and 607-7). Factors such as the placebo effect can interfere with objective assessment. Furthermore, transplantation raises all sorts of additional issues. The logistics and ethical problems of providing fetal cells for the potentially large number of patients who might benefit from such a treatment are considerable. The questions of immune reactions and reactive responses to the introduction of cells in the subretinal space have only just begun to be approached. Which patients might benefit has yet to be determined. Besides these frankly clinical issues, the basic biology underlying this potential treatment lags far behind. Currently, there are several groups worldwide engaged in further experiments with small groups of

patients and Professor del Cerro is enlarging his own study group. With this is likely to come over the next two to three years an objective assessment of the value of transplantation in treating retinal degenerative diseases. We can all hope that this initiative will succeed but presently there are a few bridges to cross before it can be contemplated as a treatment.

Basic eye research in the UK—a home of its own?

Basic eye research crosses so many disparate fields that it is difficult to envisage how there can be a sufficient number of scientists in each discipline to provide peer review criticism at a general meeting unless the meeting is very large. Meetings such as the annual meeting of the Association for Research in Vision and Ophthalmology (ARVO) and the emerging Joint European Research Meetings in Ophthalmology and Vision (JERMOV) are indeed sufficiently large to provide this role but then suffer from the criticism of being 'meetings within a meeting'. Despite this, a new grouping of basic scientists involved in eye research in the UK has formed during the past few years presumably to fill a need not supplied by the usual clutch of ophthalmology meetings in the UK. The aims of this group are to provide a forum for younger scientists to meet others working in related fields and to whom they can present their data, but also to help potential clinical research workers identify basic scientists who might help them find answers to problems.

With these aims in mind, the third British Conference for Basic Eye Research was held recently in Liverpool (25-27 March 1997). This undersubscribed but yet informative conference was enthusiastically supported by the delegates present. The keynote lecture, which was given by W R Lee (Glasgow), entitled 'Electron microscopy-2000—its future role in eye research' was an eloquent, entertaining, and educational account of the past, present, and future benefits of electron microscopy in eye research.

The value of electron microscopy to ophthalmic research cannot be overstated but recently it has had to compete with other morphological techniques such as immunohistochemistry and confocal microscopy. However, ophthalmology provides an excellent discipline in which the combined virtues of good morphology and immunohistochemistry can be displayed at the cellular level. A prominent theme at the meeting centred on developments being made in understanding the cellular mechanisms in possible modulation of proliferative vitreoretinopathy (Grierson, Liverpool/Boulton, Manchester).

The conference covered, in addition, a wide spectrum of specialties including lens, protein physiology, ophthalmic pathology, plus an excellent section on pharmacology overviewed by Jacobs (Cardiff), and was rounded off by a session on ophthalmic inflammation and immunology. The meeting achieved its aim of

providing a stage for both PhD students and young post-doctoral workers to present and discuss their basic eye research. This conference which currently takes place every two years, certainly has its position within the many conferences to be attended but would benefit from greater input from clinicians interested in research.

Evidence based medicine: the evidence for and against

In this era of accountability, it is not surprising that clinicians are being asked to justify their actions by providing evidence of the efficacy for many of their treatments. This applies no less to ophthalmology than to any other branch of medicine and indeed many of us would be hard put to justify our actions and advice 100% of the time. Of course, one's outlook on this depends on whether we regard our discipline as an art or a science, or a bit of both. Be that as it may, there is considerable pressure on journal editors to reject everything that is not rigorously backed up by firm data. This includes not only clinical and laboratory based scientific papers but review articles and editorials. However, particularly under threat is the case report which by its very nature has a limited degree of general applicability but is much loved by the clinician as 'evidence' when wishing to make a point. Would published case reports represent evidence in a court case? The *BMJ* and its associated journals are moving progressively towards publication of articles which follow a more evidence based medicine approach and in principle this can only be a good thing. While the *BJO* will continue to publish letters (case reports) for the present, the level of evidence for the case being proposed will come under closer scrutiny. Perhaps we should follow the practice adopted in case law by the legal profession where the evidence has to be irrefutable and not just suggestive before it is accepted.

Guidelines for refractive surgery

The continued (? controlled) explosion in refractive surgery has at last induced a response in both the American Academy of Ophthalmology and the Royal College of Ophthalmologists, who have prepared or are in the process of preparing guidelines for good clinical practice (*Argus*, February 1997; *College News*, March 1997). Indeed, it is unfortunate that there are no statutory requirements for surgical procedures as there are for drug prescription since this might have led to much greater control over the use of refractive surgical techniques. While there have been some valuable studies demonstrating the benefits of the techniques for both refractive and medical indications, much of the practice of refractive surgery has been performed without generalised guidance. These guidelines are therefore to be welcomed as much for providing accurate information to the public as for protecting both the patient and the surgeon.



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