

## The view from Australia

By Noel Alpines, M.D.



Noel Alpines, M.D., is an internationally renowned surgeon, lecturer, and innovator. He has developed the ASSORT computer program for analyzing astigmatism, and options for astigmatic correction, and is a high volume LASIK and cataract surgeon. His article in this month's column is very interesting because it mirrors what I believe is going to have to happen in most of the developed world. Advancing technology will present new options that governmental systems will allow, thereby moving the decision to purchase a specific surgery to the patient. However, less affluent patients will still be able to get excellent care, perhaps slightly less expeditiously and without some of the advantages of new technology IOLs and other devices. I think everyone will be interested in hearing about cataract surgery in Australia.

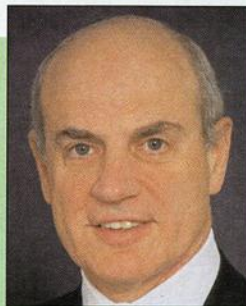
I. Howard Fine, M.D.,  
Column Editor

Cataract surgery is a widely performed procedure within Australia. There are large differences in cost, waiting times, and to some extent the technique employed for removal of the cataract, depending on the locality of the treatment and the socio-economic status of the patient. In particular, there are marked differences to cataract surgery performed in the major cities, which is largely refractive in nature, compared to that in very remote parts of central and northern Australia, largely populated by the Aboriginal community.

The health system within Australia is set up in such a way that any Australian can access medical services (including cataract and other ophthalmic surgery) through the publicly funded Medicare system. Therefore anyone requiring cataract surgery can access 'free' care through this public system, though the waiting time can be considerable depending on the location within Australia. In addition to this there is a private system of medicine and private health insurance. Although there is a cost associated with cataract surgery through the private system, the waiting time is considerably less as a general rule.<sup>1</sup> The rate of cataract surgery in Australia is 9000 per million per year, amongst the highest in the world.

Most private surgeons operating within the major cities have access to the latest techniques of phacoemulsification. Microincision cataract surgery (MICS) and phaco emulsification are the common methods of choice for many Australian surgeons. Many surgeons are familiar with the phaco delivery system (burst mode versus continuous ultrasound etc), and vary the phaco settings depending on the density of the cataract. I prefer torsional phaco through a 2.2mm incision, with a horizontal mini chop action. For most lenses I use a pulse mode with low vacuum to divide and crack the lens, then swap to a higher dynamic rise time with high vacuum and a burst delivery mode for the majority of the lens removal. As a general rule private surgeons offer a wider variety of IOLs to their patients compared to those going through the public system, with many surgeons using multifocal IOLs in suitable candidates.

Australian cataract surgeons like others around the world are facing the new challenges of refractive cataract surgery. This is most relevant in the field of astigmatism control and reduction, so that their patients can benefit from the many



Noel Alpines, M.D.

multifocal implants that are now available. Other techniques that need to be addressed and mastered involve the size and placement of the phaco incision. The phaco incision can be temporal or on-axis for astigmatism reduction, and its size can be reduced to 2.2mm which is now possible for coaxial phaco, progressing to 1.9mm and beyond in the not too far distant future. Coaxial surgery appears to be favored over bimanual microincision cataract surgery.

With the introduction of more sophisticated instruments for limbal relaxing incisions (LRIs), the decision for a temporal phaco incision necessitates three incisions (one phaco and 2 opposing LRIs). However, the on-axis surgeon may only require 2 incisions in total for a similar reduction in astigmatism (one phaco and one opposing LRI). Only a small proportion of Australian cataract surgeons perform these more advanced procedures. For the refractive tool of toric IOLs, only the lower powers are currently available in Australia. The challenges here lie in identifying and quantifying the cause of post-surgical refractive astigmatism remaining with the uncorrected corneal astigmatism.

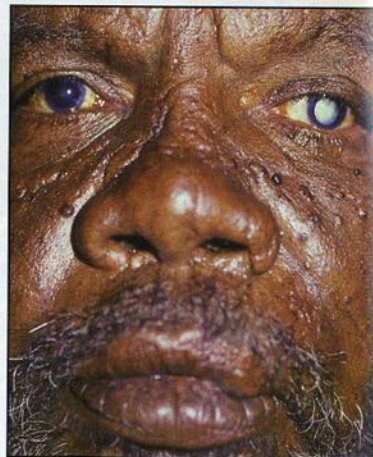
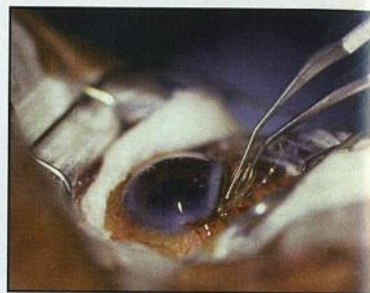
The complexities of planning and determining errors and adjustments retard the widespread uptake of these advancements in cataract surgery. With these improvements in technology, many patients now present for cataract surgery earlier than previously, while their vision is still relatively good. Cataract surgery is certainly becoming more refractive in nature in comparison to the earlier days of cataract surgery. However, as opposed to the patients in the major cities, patients in more rural parts of Australia leave it much later before they seek surgical intervention. One study found that the majority of Aboriginal patients presenting for cataract surgery were legally blind.<sup>2</sup> Where possible phacoemulsification is the technique of choice for cataract removal in the Northern Territory for Aboriginal

patients, though ECCE is still widely performed in some places.

It has also been documented that Aboriginal patients have higher rates of admission and longer average length of stay in hospital compared to non-Aboriginal patients, with many Aboriginal patients requiring overnight stays in hospital after cataract surgery.<sup>3</sup> This longer length of stay could be contributed to by the difficulty in travel as many Aboriginal people live in very remote areas of the country, and few would have relatives to offer transport after the surgery. This can contribute to a strain on the public hospital system, where there is an ongoing bed shortage crisis, and often the waiting time for patients who need to be admitted overnight is longer compared to someone who is able to have the same procedure as day surgery.

Once the procedure has been performed, it has been documented that the quality of life is vastly improved for Aboriginal patients. The rate of visually significant posterior capsule opacification (PCO) was very low within the first year, but jumped to approximately 30% within five years according to one small study.<sup>4</sup> This again creates the problem for Aboriginal patients to gain access to hospitals offering Nd:YAG laser capsulotomies.

continued on page 47



Aboriginal cataract patient.

Source: Chris Barry,  
Lions Eye Institute

Indeed, following up Aboriginal patients post-operatively can be a challenge in itself given the remoteness of their residence in many cases, making studies of the Aboriginal community difficult.

In summary, the cataract surgery procedure is varied within Australia depending on the location of treatment and socioeconomic status of the patient. The Australian health system is divided into public and private sectors, with a significantly shorter waiting time associated with the private system. As a general rule, most private surgeons have access to the latest advances in technology and technique when it comes to phacoemulsification and IOL selection, though there is a cost of surgery associated with this path that is not accessible to sections of community, particularly the rural Aboriginal community.

Government funding for the public health system has not increased at a sufficient rate to meet the demand in the past decade. 🌍

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