



The new challenge of corneal transplantation in South Africa

Modern corneal transplantation is internationally accepted as highly successful and cost effective. The avascularity of the cornea puts it in a relatively immune-privileged position, and complications due to graft rejection can be handled more effectively than in other solid organs. Modern microsurgery, which has the ability to manage postoperative astigmatism, has turned corneal transplant surgery into a most gratifying procedure as far as visual acuity is concerned. Corneal graft survival is often lifelong, with most patients not needing topical or systemic immunosuppression for longer than several months postoperatively. Patients are frequently given a new lease on life after sight-restoring corneal transplantation.

Nationally obtained corneal tissue in South Africa is harvested and supplied to ophthalmic surgeons via five regional eye banks, the Cape Town-based Eye Bank Foundation of South Africa (which for several decades was the only national eye bank and served the whole of southern Africa), Gauteng Cornea and Eye Bank in Johannesburg, Pretoria Eye Bank, KZN Eye Bank in Durban and the Port Elizabeth Eye Bank.

Unfortunately the availability of corneal tissue in South Africa has recently been severely curtailed. There has been a steady progressive 41% decrease in the total number of corneal transplants performed with tissue supplied by the five South African-based eye banks. This decrease has occurred over the past 4 years, down from 934 in 2003 to 549 in 2006. Several factors have contributed to this unfortunate state of affairs.

Legal/administrative issues due to a restriction placed on access to information on deceased persons held at the forensic (medicolegal) mortuaries. Before June 2006, South African Police Service-controlled forensic mortuaries permitted eye banks access to information on persons who had died of non-natural causes. Management and control of these forensic mortuaries passed to the Department of Health in June 2006. Owing to the confidential nature of the information available at the forensic mortuaries, and the fact that the information is actually privileged information pertaining to a SAPS medicolegal case, the Department of Health have restricted access to all information that could identify or link a deceased body to a specific person and/or the family and next of kin. The crippling result of this decision has been that eye banks have lost a vital source of access to information that could lead to potential donors.

Rising level of infected donors. Tissue from donors positive for hepatitis B or C or HIV cannot be used for transplantation. Fig. 1 illustrates the progressive negative impact of this factor on the number of useable corneas from just one of our national eye banks.

Public awareness. The South African public is not tissue transplant-conscious. Much more needs to be done to instil

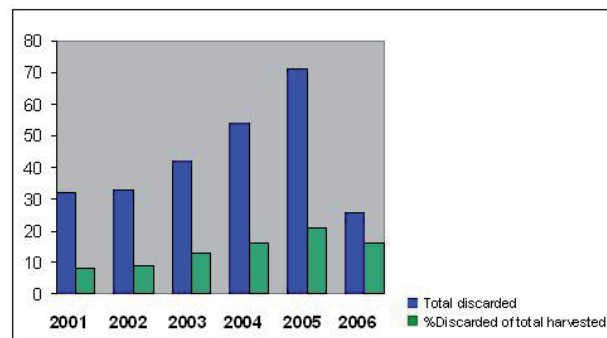


Fig. 1. Rising number (and % of total) corneas harvested from donors positive for hepatitis B and C and HIV from the Cape Town-based Eye Bank Foundation of South Africa over the past 6 years.

a nationwide awareness of the need for donor tissue. Ideally at some point in their adult lives every South African should be confronted with the choice to become a willing organ donor (e.g. at the time of application for a driver's licence, identification document, passport, etc.).

In countries such as the USA and Sri Lanka the local supply of corneal tissue exceeds national demands, and hence they are able to export worldwide. Donor corneas from the USA are readily available here, but at a cost of around R15 000 are prohibitively expensive for state hospital patients. However, the corneal disease burden and need for corneal grafting in South Africa is immense. The national waiting list for corneal grafts during the first quarter of 2007 totalled 1 738 adults and 146 children. Many state hospitals do not keep up-to-date waiting lists any more because of the scarcity of tissue. During 2006 in the whole of South Africa only 516 corneal transplants in adults and 33 in children were performed using national eye bank tissue.

Every health care professional in South Africa should be aware of the need for donors of solid organs, skin, bone and corneas. It is our collective responsibility to sensitise government and decision makers to this national challenge, and to encourage our patients to inform next of kin of their intention to be organ donors and to register themselves as willing donors with the Organ Donor Foundation of South Africa (toll free 0800 22 66 11, website www.odf.org.za).

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