

WHY SHOULD WHO BE INVOLVED

IN TRANSPLANTATION?

Transplantation is a sophisticated and expensive form of treatment requiring multidisciplinary collaborative work of experts and long-term follow-up. Transplantation would be seen as the least of WHO priorities had it not an unrivalled therapeutic effectiveness and had it not given rise to serious concerns regarding ethics, safety and access at global level.

TRANSPLANTATION, A UNIQUE THERAPEUTIC RESOURCE

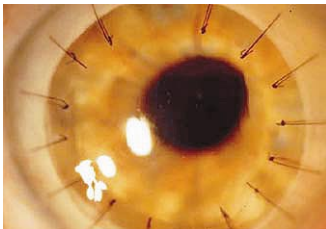
Transplantation of human organs, tissue or cells saves many lives and restores essential functions in circumstances where no medical alternative of comparable effectiveness exists.

With progress in immunosuppression over the last 15 years, transplantation has become established as a standard therapy. The shortage of human material for transplantation, however, is a major and growing limiting factor. Today, approximately 70 000 solid organs are transplanted annually; 50 000 of these are kidney replacements and more than a third of these occur in low- or medium-income countries.

Likewise, human tissue transplantation is increasing in both developed and developing countries. In Europe, hundreds of thousands of tissue transplants are performed each year and in 1999 an estimated 750 000 United States citizens received human tissue, twice as many as in 1990. Globally, it is estimated that 120 000 corneal transplantations and 18 000 allogeneic haematopoietic progenitor cell transplantations took place in the year 2000.

CHALLENGES IN TRANSPLANTATION

Patients' needs for transplantation are far from being met in almost all countries and all settings. A very important reason for this is an insufficient supply of human donor material. Procurement practices from deceased donors have failed to achieve widespread acceptance due to limitations caused by cultural and religious beliefs, but also by a lack of public information and education. As a consequence there is a trend to rely increasingly on living donors and an extensive international circulation of tissue for transplantation has emerged.



Corneal transplantation

Meeting patient needs

The case of xenotransplantation

The possibility of using cells, tissue and organs of animal origin is explored as a way of overcoming the shortage of human organs/tissue for transplantation. Clinical trials of xenotransplantation are currently taking place in several countries. This raises public health concerns, for example the risk of transmission of known – or as yet unidentified – animal infections to the public (potentially worldwide). Recommendations from WHO/OECD consultations in 2000 need to be pursued. For example, there is an urgent need for regulatory oversight of xenotransplantation trials at the national level and for international cooperation in xenotransplantation surveillance.

Maintain ethical principles

Improvements in immunosuppression have reduced the need for living donors to be genetically related to the recipient resulting in an increased reliance on unrelated living donors. This calls for greater attention to informed and voluntary consent. Remuneration for material of human origin for transplantation and traffic concerning exploitation of the human being is growing worldwide. Paying for human organs and tissues leads to commodification of the human body and entails misuse. Safeguards need to be established and maintained to ensure that transplantation does not involve commercialization or exploitation.

Reinforce safety

Transplantation carries many risks of transmission of pathogens and diseases. During the last decade several reports have demonstrated transmission of pathogens previously not identified in the context of transplantation, including parasites, bacteria, viruses and prions. Safety measures need to be redefined. Internationally-agreed standards, good practices and quality management systems are essential to maximize not only the safety of the recipient but also of the living donor.

Develop access to transplantation

The immediate cost and complexity of transplantation have often hindered its development in countries with limited resources but, in the absence of transplantation, patients with problems that can be addressed with no other available technologies are left unattended. Basic transplantation, such as cornea or kidney transplantation, can be successfully carried out by countries with limited resources at the national or provincial levels in reference teaching hospitals.

THE CASE OF KIDNEY TRANSPLANTATION

The estimated global incidence of end-stage renal disease is 1.8 million persons/year. The ability to correctly identify these patients is rapidly improving in many countries. Kidney transplantation may make sense in countries with limited health resources for several reasons: epidemiological (younger patients), technical (simplest organ transplantation procedure, fosters tertiary health care improvement and collaborative networks in care) and economic. Indeed kidney transplantation not only yields survival rates and a quality of life far superior to other treatments for end-stage renal disease, such as haemodialysis, but is also less costly in the long run. There is clearly room for progress and better use of health resources.