



ELSEVIER

Contents lists available at ScienceDirect

Best Practice & Research Clinical Gastroenterology



6

Liver, pancreas and small bowel transplantation: Current ethical issues



Gert van Dijk, MA, Assistant Professor of Medical Ethics and Philosophy^{a,*}, Medard Hilhorst, M.Sc., M.Th., Ph.D., Associate Professor of Medical Ethics and Philosophy^a, Edmond Rings, M.D., Ph.D., Pediatrician, Professor of Pediatrics^{b,c,1}

^a Department of Medical Ethics and Philosophy of Health Care, Erasmus University Medical Center, P.O. Box 2040, 3000 CA Rotterdam, The Netherlands

^b Department of Pediatrics, Sophia Children's Hospital, Erasmus Medical Center, Rotterdam, The Netherlands

^c Willem-Alexander Children's Hospital, Leiden University Medical Center, Leiden, The Netherlands

¹ Address: P.O. Box 2040, 3000 CA Rotterdam, The Netherlands

A B S T R A C T

Key words:

Liver transplantation
Pancreas transplantation
Small bowel transplantation
Kidney transplantation
Donation
Consent
Risks
Benefits
Fairness

We describe the medical state of the art in liver, pancreas and small bowel transplantation, and portray the ethical issues. Although most ethical questions related to these transplantations are not specific for liver, pancreas and small bowel, they do challenge ethical analysis as well as new policies and clinical procedures. Firstly, outcomes continue to be of utmost concern, as information is only limited available, is developing over time and is surrounded by many uncertainties. Secondly, characteristics of donors and recipients should be carefully evaluated. The question of what qualifies a donor and a recipient should be considered against the background of a quest for extended criteria, embracing marginal cases, and a judgment with regard to what counts as a good enough outcome. Thirdly, ethical principles of autonomy and fairness are pushed, given the circumstance of severe scarcity, towards limits that can easily be crossed.

© 2014 Elsevier Ltd. All rights reserved.

* Corresponding author. Tel.: +31 10 7038482.

E-mail addresses: g.vandijk.2@erasmusmc.nl (G. van Dijk), m.hilhorst@erasmusmc.nl (M. Hilhorst), e.rings@erasmusmc.nl (E. Rings).

Introduction: current medical possibilities in liver, pancreas and small bowel transplantation

The first section deals with relevant medical possibilities in the field of liver, pancreas and small bowel transplantation. Different types of transplants for different recipients will be outlined, as well as the current state of the art.

In the second section the ethical issues are portrayed, by referring to the prevailing ethical framework, the ethical challenges, and the actual issues still subject of ethical debate.

Liver

Orthotopic liver transplantation (OLT) is the definitive treatment for end-stage liver disease in both children and adults. Advances over the past decades have resulted in excellent patient and graft survival rates in what were previously cases of fatal disorders [1,2]. These developments have been due to innovations in surgical technique, increased surgical experience, refinements in immunosuppressive drugs and regimens, quality improvements in intraoperative anaesthetic management, better understanding of the pathophysiology of the liver diseases, and better preoperative and postoperative care. This part of the review will discuss the major aspects of liver transplantation with respect to surgical technical considerations for orthotopic liver transplantation, indication for transplantation, optimal timing of liver transplantation, and patient and graft survival outcomes.

Post-mortem donors

Establishment of standard liver transplantation techniques in which post-mortem donors are most frequently used, development of immunosuppressive medications and accumulated experience using them safely, and improvement of intensive care and anaesthesia played major role to have current 88%–90% one-year survival after liver transplantation [3].

Living-related liver transplantation

Living donor liver transplantation (LDLT) is a well-established strategy to plan the procedure and to decrease the mortality in the waiting list and recent studies have demonstrated its value even in patients with low model for end-stage liver disease (MELD) score. However, LDLT is still under a high level of scrutiny because of ethical and logistical challenges as demonstrated by a decline in the number of procedures performed in the last decade in Western Countries. Many aspects make LDLT different from deceased donor liver transplantation, including timing of transplantation, procedure-related complications in donor and recipient, as well as immunological factors that may affect graft outcomes. In selected cases, LDLT offers advantages over deceased donor liver transplantation [4]. Advantages include controlled timing of the procedure and sophisticated collection of anatomical and biological information of the donor.

Living donor liver transplantation (LDLT), originally used in children with left lateral segment grafts, has been expanded to adults who require larger grafts to support liver function. Most adult LDLT procedures have been performed with right lobe grafts, and this means a significant risk of morbidity for the donors. To minimise the donor risk, there is renewed interest in smaller left lobe grafts. The smaller graft size increases the recipient risk in the form of small-for-size syndrome (SFSS), which results in suboptimal perfusion and function of the graft. This essentially transfers the risk from the donor to the recipient. The surgical team has to pay particular attention to the different types of liver grafts and the use of graft inflow modification to ameliorate the risk of SFSS.

Adult-to-adult (AA) LDLT is viewed as a viable alternative to whole liver transplantation on the treatment of end-stage liver disease. Over the past two decades, right lobe AA-LDLT has been the standard because of concerns related to graft size. SFSS is an entity that presents in recipients of small grafts. It negatively affects patient and graft survival and recipients of grafts with a graft weight-to-recipient weight ratio (GW/RW) lower than 1.0 being at the highest risk. Over the last decade, our understanding of SFSS has identified portal vein pressure (PVP) as a major determinant in the development of SFSS. Direct or indirect surgical PVP modulation has demonstrated a way to prevent the

Download English Version:

<https://daneshyari.com/en/article/3254142>

Download Persian Version:

<https://daneshyari.com/article/3254142>

[Daneshyari.com](https://daneshyari.com)