

Preface

Organ procurement from brain-dead donors was not socially accepted for a long time in Japan. For that reason, organ transplantation in this country involved accumulating experience in using organs from donors after circulatory death (DCDs) and from living donors, adhering for the most part to criteria that exceeded the usual standards for organ donation.

It was first shown by Yoji Iwasaki and his colleagues in the 1960s that kidneys procured from uncontrolled DCDs could be transplanted safely [Iwasaki Y et al (1969) Cadaveric renal transplantation (I): patient selection and transplantation method. *J Jpn Soc Transpl* 4(1):72–78 (in Japanese); Iwasaki Y et al (1969) Cadaveric renal transplantation (II): post-transplantation course and care. *J Jpn Soc Transpl* 4(1):79–84 (in Japanese)]. Following their initial success, they continued with other cases and established clinical standards for renal transplantation from uncontrolled DCDs. [Iwasaki Y (ed) *Cadaveric renal transplantation* (1974) Igaku Shoin, Tokyo]. Also in Japan, some organ-preservation solutions and new preservation methods were developed, and their clinical applications were carried out widely. Research on viability assay methods was also productive. There were numerous groundbreaking results and satisfying clinical performances with organ transplants from marginal donors.

In Europe and the United States, where the use of brain-dead donors was widely accepted, transplants from DCDs were not performed except during the dawn of the transplant era. There were wide differences in the concept of the “marginal donor.” In 1995, the Maastricht Classification was advocated. There remained, however, a wide discrepancy between their practices and ours regarding the actual conditions of DCDs.

In 2001, from the results of a kidney transplantation, an extended criteria donor (ECD) was defined by the United Network for Organ Sharing (UNOS) as a donor who has one or more factors influencing the results of a transplant—factors such as advanced age, cerebrovascular disorders, hypertension, and/or organ functional disorders. This concept was accepted widely and classified marginal donors into DCDs

and ECDs, with further categorization into controlled and uncontrolled DCDs. Discussion of marginal donors thus has become more intelligible and can now be debated as a common topic.

Recently, donations from DCDs not only for kidney but also for pancreas and lung transplantation have been clinically achieved. Even with liver and heart transplantation, although still in the experimental-trial stage, aggressive research has been reported as organ shortages have become much more apparent. Factors and standards for grading DCDs and ECDs are different for each organ, and transplant results still vary. This situation is expected to change with an increase in knowledge from clinical and experimental studies. Improvement in the usability of marginal donors would be a boon for patients who have suffered organ failure.

This book is the first compilation of information about marginal donors. It mainly describes the history of the concept of marginal donors and the standard and current views of DCDs, standard criteria donors (SCDs), and ECDs for each organ. We regret that many of our predecessors' achievements have not yet been introduced. Publication of this book has been made possible by Springer, Japan. The book was written and edited by the members of the Japanese Society for Organ Preservation and Medical Biology and reflects the results of their work. We express our profound gratitude to them.

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Marginal Donors

Current and Future Status

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