

During the past 60 years, organ transplantation has developed increasing importance in the treatment of patients with end-stage organ failure and, more recently, in patients with diabetes who might benefit from pancreas or pancreatic islet transplantation. As the majority of donor organs and cells come from human subjects who have undergone brain death, the pathophysiology of brain death and the management of the brain-dead potential organ donor have received considerable attention. The impact of brain death on the entire body and on the organs that might be used for transplantation is wide reaching and complex.

To our knowledge, however, no book has put together in a comprehensive manner what is known about the pathobiology of brain death and how a potential organ donor should be managed to ensure the maximum number of viable organs can be obtained for the purposes of transplantation. The current book is aimed at correcting this deficiency. It addresses the scientific basis of brain death and its sequelae, such as the hormonal, inflammatory, and innate immunological responses, and summarizes how brain death should be determined and how a potential organ donor should be selected and managed to ensure that as many organs as possible can be utilized. The important role of the transplant coordinator in organizing all aspects of organ retrieval is detailed. The impact of brain death on subsequent *ex vivo* storage and even repair of organs is highlighted, and surgical techniques for multiorgan excision are described. The challenge of increasing the number of deceased organ donors and what future developments we might anticipate in the management of potential donors are topics that are also addressed.

The selected authors are all experts in their fields and reflect opinions from a wide spectrum of centers; for example, reviews of the management of brain-dead potential organ donors have been contributed by experts from North America, Europe, and Australasia, thus allowing for comparison of regional differences in policy and care. We believe the book will be of value to basic scientists, clinicians, and all involved in organ transplantation or critical care.

Exciting developments in the fields of xenotransplantation, stem cell biology—including the potential of xenogeneic pluripotent stem cell technology (interspecific blastocyst complementation)—or regenerative medicine may eventually provide another source of organs and cells for clinical transplantation. Until then, we believe that the information detailed in this book will be a

source of guidance to surgeons, physicians, coordinators, biomedical scientists, and all other personnel involved in organ transplantation or in the management of patients with severe brain injury likely to progress to brain death.

Dr. Tom Starzl, one of the greatest of the pioneers in organ transplantation, has honored us by contributing the *Foreword*, for which we are deeply grateful. It has been a privilege for those of us who entered the field later to attempt to expand on the seminal contributions of Dr. Starzl and his fellow pioneers.

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