



Anesthesia and Perioperative Care for Organ Transplantation

Kathirvel Subramaniam, Tetsuro Sakai (Editors). Springer, New York, 2017, \$260.81, 586 pages. ISBN 978-1-4939-6377-5

Sonja Payne, BSc, MSc, MD, FRCA

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I was in the process of reviewing *Anesthesia and Perioperative Care for Organ Transplantation* when news was released announcing the death of Dr. Thomas Starzl. Known as the “the father of modern transplantation”, Dr. Starzl’s foreword introduces this textbook, lending it a certain poignancy.

In the foreword, Dr. Starzl outlined the aim of this book as a summary of “the progress in organ transplant medicine, surgery, anesthesiology and critical care medicine” in each field of transplantation. This is no small task. It is not surprising, therefore, that this weighty tome is nearly 600 pages. The hardcover version measures approximately 28 × 21 cm, so it is not likely to be a resource that is kept at hand for frequent reference, although a more portable electronic version is available for purchase directly from the publisher’s website (\$198.26 CAD).

The editors enlisted contributions from leading experts in transplantation, including anesthesiologists, intensivists, surgeons, and specialist internists. In total, 91 authors contributed to the manuscript, with 81 of these contributors practicing in the United States.

The book is organized into nine parts comprising 47 chapters. Part 1, entitled *General Topics*, begins with ethical considerations of organ transplantation and follows with chapters on donation after cardiac death, living-related organ transplantation, and intensive care and anesthetic management of the deceased multi-organ donor. This section is interesting and diverse. Topics include ethical challenges, applied physiology during

donor management, and the clinical process of organ procurement, reminding the reader that positive transplant outcomes begin with considered donor selection and clinical care. Slightly incongruous in the first section is the chapter entitled “Prevention of Perioperative Infections in the Organ Transplant Recipient,” arguably a pertinent topic - but for inclusion elsewhere.

The subsequent eight parts are organ-specific for lung, heart, kidney and pancreas, liver, multi-visceral, and composite tissue graft transplantation. Each part provides comprehensive accounts of preoperative recipient evaluation, intraoperative anesthetic management, and postoperative care and considerations. The most extensive sections of the book address thoracic and liver transplantation, with parts dedicated specifically to the unique considerations and challenges in these areas.

A favourite chapter in each of the nine sections is organ-specific surgical management. The plentiful colour photographs and schematic drawings are relevant and informative, providing a greater understanding of the critical aspects of surgical technique than may be gleaned by peering across the surgical drape. Another strength of this textbook is the organ-specific chapters describing the perioperative management of transplant survivors regarding non-transplant surgery. The provision of safe perioperative care for these individuals may be challenging. The expert synopses of the complexities and considerations provided in these chapters are welcomed.

Clearly, much thought went into choosing appropriate authors for the chapters. For example, specialist internists were tasked with chapters on patient selection and preparation, anesthesiologists with intraoperative management, and transplant surgeons with surgical technique. This considered use of recognized subject-

S. Payne, BSc, MSc, MD, FRCA (✉)
London Health Sciences Centre University Hospital, London,
ON, Canada

matter experts lends credibility to the information provided. However, with a different author (or group of authors) for each chapter, there is an understandable variation in the presentation style and, sometimes, quality of the content. For example, the chapter entitled “Multiorgan Transplantation including the Liver” demonstrates an organized and comprehensive approach utilizing current expert guidance and evidence. In contrast, the chapter entitled “Anesthetic Management of Patients Undergoing Pancreas Transplantation” has less clear structure, with significant repetition among the topics. There is also a lengthy paragraph describing difficult intubation strategies, arguably not necessary in a chapter on transplant anesthesia. Despite a few chapters falling short in quality, the majority of the chapters are sensibly organized, detailed, and relevant.

Dr. Starzl described this textbook as “unique” in the achievement of summarizing “the current knowledge of perioperative organ transplantation.” However, this is not the only textbook of transplant anesthesia on the market. The *Oxford Textbook of Transplant Anesthesia and Critical Care* (2015) also boasts of organ-specific chapters written by expert authors. However, clear differences exist between these textbooks. The Oxford textbook dedicates nearly 60 pages to the history and ethics of transplantation compared with a more succinct overview presented by

Subramaniam and Sakai in seven pages. Strengths of the book by Subramaniam and Sakai that are lacking in the Oxford textbook include organ-specific chapters describing both relevant surgical technique and perioperative considerations for the transplant recipient undergoing non-transplant surgery. Organ-specific textbooks of transplant anesthesia are available and may provide a more detailed account of the pathophysiology and intricacies of management for specific organ transplant - but at the compromise of compiled knowledge relating to the transplant of other major organs.

In summary, this textbook is truly a multidisciplinary collaboration of perioperative transplant management, offering a balance between relevant science underpinning clinical care and expert clinical insight. Given the overlap of specialist clinical care for the transplant recipient, I would recommend this book to all clinicians caring for patients undergoing organ transplantation. Dr. Starzl concluded that “this book would serve as an authentic reference” for both the novice and experienced clinician. I think he was right.

Conflicts of interest None declared.

Editorial responsibility This submission was handled by Dr. Hilary P. Grocott, Editor-in-Chief, *Canadian Journal of Anesthesia*.