



## Difficult Decisions in Cardiothoracic Critical Care Surgery. An Evidence-Based Approach

Editor Vassyl A. Lonchyna, Springer, 2019, 719pp.

We live in an era of novel minimal invasive surgical techniques, complex medical devices, novel drug therapies that require sophisticated diagnostic and therapeutic algorithms. The aim of practitioners, of course, is to embrace these challenges of new developments in order to improve postoperative outcomes and reduce patient mortality. A recent letter to *The Lancet* (Global burden of postoperative death. *The Lancet* 2019;393:401) disclosed that a 7.7% postoperative death rate was ranked third in the top ten global causes of death in 2016. It highlights the importance of this topic as “the rate of postoperative deaths is a measure of the success of surgical care systems, and improving this metric is a global priority.”

The authors of this recently published volume “*Difficult Decisions in Cardiothoracic Critical Care Surgery*,” edited by Vassyl A. Lonchyna, the latest in the series from the Chicago University Medicine, apply an evidence-based approach to shed light on an impressive number of highly relevant themes which have emerged on the pinnacle of the newest developments in cardiothoracic surgery and postoperative care. The changing landscape of cardiothoracic surgery from open to minimally invasive approaches and novel devices of cardio-respiratory support requires us to revise the most basic postulates of the postoperative care as, for example, cardiac arrest after minimally invasive cardiac surgery. Based on data gathered, recommendation is made that peripheral ECMO and not an emergency sternotomy should be the first-line intervention in cardiac arrest in non-sternotomy patients! Having extensive experience of ECMO use in my daily routine, I can only completely agree with the authors. Furthermore, ECMO can be considered as a salvage from cardiogenic shock. The implementation of early awakening, early extubation and early mobilization after ECMO implantation brings additional benefit and early recovery to these patients. I was fairly surprised as well that many already highly established principles of critical intensive care like epinephrine and vasopressin use following cardiac arrest after cardiac surgery, were actually not supported by evidence. A major portion of the text is dedicated to the prevention and postoperative management of bleeding, atrial fibrillation and vasoplegia, which are the essence of our daily routine in postoperative critical care. The book also deals with ethics and quality and end of life care in the intensive care unit with emphasis on the role of the patient’s family in the decision making process. It is barely possible to mention all topics in a such short review but my goal was to encourage all intensive care specialists, cardiothoracic surgeons, medical students and all other doctors who cross the paths of these patients to have intimate acquaintance with this book because the authors succeeded in a brilliant way to illuminate the most challenging problems of modern-day cardiothoracic critical care. It is undoubtedly an excellent contribution to this year’s world-wide celebrations of a genius and “the father of evidence-based medicine”! Highly recommended!

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