

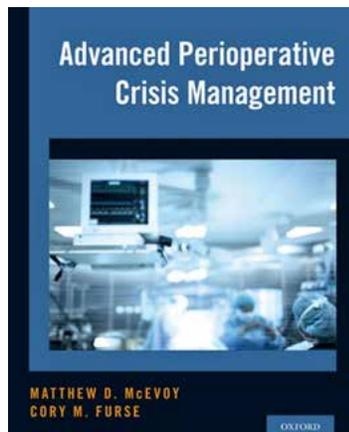
BOOK REVIEW

Advanced Perioperative Crisis Management

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Anesthesiologists are often required to manage unexpected clinical crises during peri-operative period. Decision making during these anticipated



or un-anticipated crises has been an area of interest for anaesthesiologists, nurses, and other physicians working in operating rooms, post anaesthesia care units, and critical care areas. Within perioperative area, these events are almost always witnessed, and the first responders

are usually knowledgeable about patient's medical history and the sequence of events leading to an unstable or pulseless patient. On the contrary, when a similar situation is encountered elsewhere within the hospital or outside the hospital, it is mostly unwitnessed and traditional ACLS (advanced cardiac life support) focuses on restoring circulation and oxygenation without knowing the prior medical history.

“Advanced Perioperative Crisis Management” provides a comprehensive write-up on principles & practice for perioperative crises management. Authors of this book believe that perioperative emergencies are different from other hospital emergencies e.g. cardiac and respiratory arrest in medical wards etc. This book is an excellent attempt to comprehensively cover varied topics describing epidemiology, pathophysiology, assessment, and management in all age groups of patients. Authors reiterate simple differences between traditional ACLS and A-ACLS (anesthesia advanced cardiac life support) with special emphasis on applied cognitive sciences during stress handling, and importance

of practicing clinical guidelines and algorithms in simulated scenarios to develop proficiency in handling such crises when they occur in real life.

The book has 96 chapters divided into nine sections or parts, contributed by 133 authors, and covers a comprehensive list of topics essential for practicing anaesthesiologists of tertiary care hospitals. Each chapter starts with a common clinical case scenario, followed by a comprehensive discussion under sub headings appropriate for the topic. Case vignettes are relevant, immediately evoke the reader's interest, and provide a peg to hang the entire discussion on. Case based learning discussion points ensure that solutions are not provided to the learners on a platter. Instead they have to read and understand the entire content to be able to respond correctly, encouraging critical thinking and logical reasoning.

Three chapters in Part I “Crisis Resource Management: Nontechnical Skills of Team Performance” highlight a methodical approach towards unstable or pulseless patient, principles to improve team performance during crisis, and the value of cognitive aids when faced with emergencies during perioperative period. Key Components of Crisis Resource Management were clearly narrated with relevant evidence.

Part II “Cardiac Crisis” has 5 chapters covering perioperative cardiac urgencies and emergencies with detailed discussion on myocardial ischemia, aortic disruption, cardiac dysrhythmias, and severe valvular disease through interesting clinical cases. Unlike the traditional approach of ACLS, the management of different cardiac arrest cases during perioperative period is described using A-ACLS algorithms and protocols that are based on clinical experience instead of evidence based practices.

Part III “Shock” provides updated insight on latest definitions, pathophysiology, and classification of shock in the introductory chapter. Other four chapters are focused on four different types of

shock i.e. cardiogenic, hypovolemic, obstructive, and distributive. Each chapter covers all aspects of management including mechanism of circulatory dysfunction or failure according to the case scenarios. Latest updates on transesophageal and transthoracic echocardiogram are summarized. In addition, systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis, and septic shock are thoroughly described citing relevant evidence.

Part IV "Pulmonary Crises" comprises of 11 chapters covering most crises situations using commonly encountered clinical cases. In the chapter on pulmonary urgencies and emergencies, a thorough list of differential diagnosis of desaturation is presented in three logical divisions i.e. decreased delivery of oxygen, decreased delivery of blood, and impaired oxygen exchange. The American Society of Anesthesiologists (ASA) practice guidelines/algorithm, with additional supportive data is recommended for the management of difficult airway. For laryngospasm, several algorithms and methodologies have been described but authors proposed one treatment algorithm for all cases, which may not be acceptable for all physicians.

For preventing aspiration pneumonitis, ASA "Practice Guidelines for Preoperative Fasting and the Use of Pharmacologic Agents to Reduce the Risk of Pulmonary Aspiration" is highlighted by authors. In addition, initial & subsequent follow up management of aspiration is provided with clear practical steps. Physiologic Airflow Disruption: Bronchospasm, Obstructive Lung Disease, Asthma, and Status Asthmaticus were discussed through common clinical cases. Management of secretions, pneumonia, pulmonary edema, and hemoptysis resulting in impaired diffusion across the alveolar capillary membranes and V/Q mismatch is also discussed. This part concludes on two important topics for anaesthesiologists i.e. 'Hypoxia During Anesthesia: Machine and Monitor Issues' & 'Airway Fire.'

Part V of this book covers metabolic function, common electrolytes and endocrine problems during perioperative period with management based on recent evidence. Some of the common electrolyte abnormalities were discussed using multiple scenarios to familiarize the reader with the situation.

Part VI is dedicated to maternal management ranging from routine obstetric cases to high risk

pregnancy. This section covers a variety of hot topics of obstetric anaesthesia especially neurological crises during pregnancy.

Part VII constitutes almost all neurological disorders commonly seen in emergency room and medical & surgical ICU. Emphasis is on systemic approach towards managing acute stroke, seizures, status epileptics, and hepatic encephalopathy which results in slow but improved prognosis.

Part VIII is dedicated to pediatric anaesthesia covering pertinent topics especially non-cardiac surgery in children with underlying cardiac disease, post tonsillectomy bleeding, Hemophilia, and sickle cell disease. In addition, some rare emergencies are also highlighted in detail.

Part IX on 'Toxins' have covered the topics of over dosage and toxicity emergencies concisely.

Currently there are few books available on peri-operative crises management. This book is unique, covers a comprehensive range of topics essential for anesthesia & emergency medicine trainees and practicing physicians working in critical areas of tertiary care hospitals. It is well organized in sections/parts with thoughtful sequence of chapter topics, culminating in case based learning discussion points, encouraging critical thinking of learners. Management suggestions in a tabular format in most chapters provide easy and quick access to solutions while dealing with such emergencies. Index is user-friendly offering accurate retrieval of information.

In our opinion, this book makes a valuable contribution towards peri-operative crisis management and offers a concrete summary of the knowledge required in clinical crises. We would recommend "Advanced Perioperative Crisis Management" for Anaesthesia & Emergency medicine residency and critical care fellowship curriculum guidance and to use this book as a quick reference for practicing physicians in emergency crises.

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