BOOK REVIEW

50 Studies Every Intensivist Should Know

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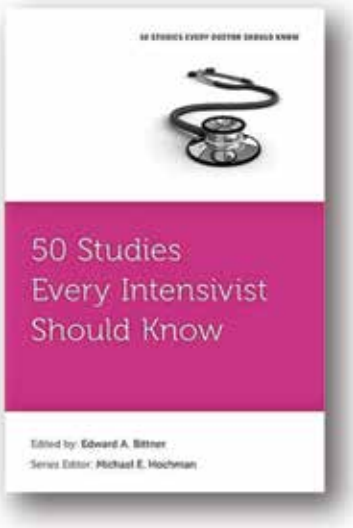

An attractive title quite resembling "50 shades of Grey" one of the most famous novels of all times and also a hit motion picture of Hollywood. Whether or not the authors of 50 Studies series had this resemblance in their mind, we have no idea. They've done an excellent job writing this great recollection of landmark research that is the first step towards the staircase of evidence based intensive care medicine in a precise, concise and accurate way. Although many books are written on the research trials of critical care in the past but the design of this book is too different and unique in its own way.

The book was published in New York; USA by Oxford university press in 2018.

It's editor Dr Edward A. Bittner is not only the program director of fellowship in critical care medicine at MGH, but also he has contributed as author, co-author and editor in a number of critical care books. The most worth mentioning is Critical Care Handbook of Massachusetts general hospital which is among the bestselling books of Intensive Care Medicine and is read by almost every doctor or nurse around the globe who works in ICU.

When we read the table of contents, the first thing comes to mind is that many important studies are not included. But the author gives the answer on the very next page that second edition is on way with title, "Another 50 Studies Every Intensivist Should Know".

Every topic starts with a research question followed by year of study, sponsors, location, inclusion and exclusion criteria, number of patients enrolled and finally the results. What makes it different from other books is the criticism, limitations and shortcomings of the study. Also, trials similar to relevant study are mentioned with brief explanation and references. And at the conclusion of topic, a case scenario is given with answer to teach the clinical application of respective trial.

This book is divided into nine sections. Each section deals with a specific system.

First section deals with Neurology, sedation and analgesia. It includes hypothermia after cardiac arrest to improve neurological outcome. Sedation vacation to facilitate weaning and decrease ventilator days in ICU. Decompressive craniectomy for traumatic brain injury and importance of intracranial pressure monitoring.

Second section deals with cardiovascular system and resuscitation. It starts with critical appraisal of goal-directed therapy in severe sepsis. PACMAN trial discussing role of pulmonary artery catheter in ICU. Next comes role of IABP in MI related cardiogenic shock and left ventricular assist devices in advanced heart failure. Compression-only CPR vs traditional CPR with rescue breaths found no difference between both groups in non-cardiac causes whereas improved outcomes when compression-only CPR was adapted.

A comparison of various vasopressors and inotropes found negligible difference in overall outcome. In acute MI comparison of primary PCI with thrombolysis showed improved results in PCI group.

Third section starts with the landmark ARDSnet trial in which low tidal volume and high PEEP strategy improved morbidity and mortality when compared to traditional strategies. Next comes the PROSEVA

study implicating effects of prone position in ARDS. One good turn deserve another was concluded. Conservative fluids versus liberal fluids strategies in ARDS where major design limitation was inability to blind physicians that may have caused bias. The role of steroids in ARDS was a controversy and it still remains to be.

One of the trials that was not supposed to be included in this book is a small, underpowered study of early versus late tracheostomy in critical patients. There were a lot of deficiencies in this trial. The respiratory section ends with the role of NIV in acute COPD.

Fourth section starts with risk factors for gastrointestinal bleeding followed by various trials on nutrition. The role of nasogastric and nasoenteric feeding in acute pancreatitis. The final trial was once again a negative trial with conflicting results about glutamine and antioxidants supplements in critical patients.

Fifth section covers nephrology. First trial demonstrates lack of efficacy of renal-dose of dopamine in AKI. Next comes the role of hemodialysis versus CRRT in AKI that showed same outcome and similar adverse events in both groups.

Sixth section covers hematology. It starts with TRICC trial giving a transfusion trigger of 7.0 g/dl hemoglobin in non-cardiac and 10 g/dl in cardiac patients. The role of tranexamic acid in bleeding trauma patients showed mild benefits. The studies determining the protocols for massive transfusion favored a ratio of 1:1:1, that means 6 pints of platelets, FFPs and RCC each in severe trauma.

Seventh section covers infections. It starts with a trial on VAP showing no clinical advantage of prolonging antibiotics to 15 days compared with 8 days. Bronchoalveolar lavage in routine wasn't found to be superior to endotracheal suction in reducing VAP. Procalcitonin levels in reduction of use of antibiotics was uncertain.

Last section deals with endocrinology. NICE-SUGAR; a large pragmatic clinical trial found that intensive blood glucose control increases the risk of mortality. CORTICUS trial couldn't find significant benefits of steroids in septic shock.

From junior postgraduate residents to senior consultants, this book is a must read. After finishing this volume, the readers would be satisfied about their knowledge of evidence-based critical care medicine.

Dr Muhammad Haroon
MBBS, MCCM, MRCP, FCCM
Consultant Intensive Care Medicine
Maxhealth Hospital, G-8 Markaz, Islamabad
(Pakistan)
haroonoptimist@gmail.com

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