*Michael J. Avram, Ph.D., Editor*

## 4th National Audit Project of the Royal College of Anaesthetists and The Difficult Airway Society: Major Complications of Airway Management in the United Kingdom: Report and Findings.

Edited by Tim Cook, M.D., Nick Woodall, M.D., and Chris Frerk, M.D. London, The Royal College of Anaesthetists, 2011. Pages: 220. No price available; information available at http://www.rcoa.ac.uk/nap4.

Expertise in airway management is a critical skill set for an anesthesiologist. We train for years to be competent and facile with multiple different airway devices and develop comprehensive airway management plans. Despite this intensive training, failed airway management occurs, and is a significant source of anesthesia-related patient morbidity and mortality. In fact, "cannot intubate, cannot ventilate" scenarios account for approximately 25% of all anesthesia-related deaths. The *4th National Audit Project of the Royal College of Anaesthetists and The Difficult Airway Society: Major Complications of Airway Management in the United Kingdom: Report and Findings* is a prospective study designed to accurately define the types of airway devices used and incidence of airway complications in the United Kingdom. The goal of the report is to interpret these data to make recommendations to improve patient safety during airway management.

The contributors and reviewers of this report represent a distinguished group of experts from the Royal College of Anesthetists, The Difficult Airway Society, the Association of Pediatric Anesthetists, the National Patient Safety Agency, the Association of Anesthetists of Great Britain and Ireland, the Intensive Care Society, and the College of Emergency Medicine. The breadth and depth of expertise on the *4th National Audit Project* enabled the panel to review the data to reinforce existing knowledge, identify new information, and, most importantly, provide expert opinion and recommendations for preventing airway complications for future patients.

The *4th National Audit Project* is well organized, with three distinct sections. Section 1 is a description of the project and quantitative analysis of the gathered data. The report impressively succeeds in its goals of determining the types and frequency of airway devices that are used in the United Kingdom as well as the incidence of major airway complications that lead to significant patient morbidity and mortality. The report, admittedly, recognizes that they likely underestimate the incidence of significant airway complications. Section 2 is a clinical review of 186 cases that were reported. The chapters in this section are organized by phase of anesthesia, location of airway complication, and airway management technique. Each chapter is written to stand alone but, when relevant, cross references are available. They include a brief review of the quantitative analysis, a relevant and high-yield literature review, and a broad review of the cases, and conclude with a discussion of the pertinent clinical themes that were identified and recommendations from the expert panel. The chapters are highlighted by detailed case reports that are typical of the complications related to anesthetic phase, location, or airway device. Section 3 is a summary and overview of the learning points and recommendations from the expert panel. This includes checklists and algorithms for intubation in remote locations, endotracheal tube or tracheostomy displacement, and proforma management plan for potential intubations in the intensive care unit.

It is important to recognize that *4th National Audit Project* is not a textbook on airway management. The panel does not provide recommendations or instructions for a provider to improve their airway management skills. The reports states that it does not support or condemn specific airway management techniques. The information presented in this report is relevant to senior trainees and attending anesthesiologists who will appreciate the value and insight gained from another practitioner's experiences. The *4th National Audit Project of the Royal College of Anaesthetists and The Difficult Airway Society: Major Complications of Airway Management in the United Kingdom: Report and Findings* undertook a challenging task to identify, analyze, and describe this major source of anesthesia-related morbidity and mortality. The report succeeded in its goal and identified clinical themes that can help senior trainees recognize potentially dangerous situations and reinforce an attending anesthesiologist's knowledge to improve patient care. As the editors state, the goal of our profession "should be to reduce serious complications of airway management to zero."

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## The Essence of Analgesia and Analgesics.

Edited by Raymond S. Sinatra, M.D., Jonathan S. Jahr, M.D., and J. Michaels Watkins-Pitchford, M.D. New York, Cambridge University Press, 2011. Pages: 550. Price: $99.00.

In 2011, the pain specialist has numerous medication options available to treat a variety of chronic pain conditions. Cataloging the extensive array of medications available is daunting. *The Essence of Analgesia and Analgesics* concisely encapsulates these advances in pain medications into a single

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comprehensive, portable text. The book provides a useful reference that reviews the current advances in medications in an easy-to-use format without the sheer volume of a formal reference text. This book is an excellent complement to the medication sections of larger texts, such as *Bonica's Management of Pain*. The book will be helpful for any anesthesiology resident or pain medicine fellow in training.

*The Essence of Analgesia and Analgesics* does more than just catalog medications: it offers a unique and refreshing review of the molecular basis of pain and its relationship to clinical pharmacology. The discovery of μ-opioid receptor polymorphisms and their clinical relevance is a key element of the future of pain medicine treatment. The interindividual genetic differences regarding specified pain medications, their interaction with receptors, and their metabolism have set future directions for pain treatments. The book not only discusses these unique genetic advancements and their relationship to pain physiology but also places these elements within a clinical context.

Sinatra *et al.* skillfully walk the reader through pain physiology and the clinical relevance of numerous pain medications. Although multiple authors have contributed to the text, the editors ensure that the flow and format unify the text in seamless fashion. The book reviews conventional treatments along with the latest advances and concludes by describing the most novel medications and plausible drug targets for the future.

The book is partitioned into 12 sections, with the first section describing pain pathophysiology. The remaining sections deal with a number of different medication classes, ranging from opioids to N-methyl-D-aspartate receptor antagonists. Some sections of the book include chapters with readily applicable practical information, such as understanding when to perform a neuraxial procedure in a patient who is anticoagulated.

Chapters that review a specific medication are typically structured to include the drug's mechanism of action in addition to its metabolism, indications *versus* contraindications, common doses, and treatment advantages *versus* disadvantages. The chapters are outlined with elegant schematics of receptor physiology, medication tables for ease of comparison, and relevant clinical discussion regarding each of the medications reviewed.

One of the limiting factors of the book is a defined approach to the use of medications presented for specific pain conditions. Often a chapter may allude to a medication's use for a particular pain condition, but data or specific practice techniques on its use are lacking. Some chapters have more information than others in this context. There is also a paucity of evidence-based guidelines to guide pain clinicians to effective medication choices for specified pain conditions.

Another critique pertains to the chapters that describe opioid medications and related treatments. The discourse surrounding the appropriateness of chronic opioid management for patients in chronic nonmalignant pain has been increased to a national discussion of great importance. In order to educate our future physicians appropriately with respect to responsible opioid prescribing, these chapters should have a complementary section to describe strategies that have been employed to reduce the risk of abuse, addiction, and diversion. The pharmacology of opioids in a clinical setting should not be discussed without providing the clinician the context to make appropriate decisions regarding responsible opioid-prescribing practices.

Despite these major critiques, there are many interesting novel sections to the book. The 12th section of the book is of particular interest, describing new and emerging therapies in wonderful detail, with more than 20 chapters dedicated to the topic. Chapters discussing intranasal ketamine, inhaled fentanyl, morphine-6-glucoronide, transdermal buprenorphine, and tamper-resistant opioids are nothing short of engaging and succinctly written.

*The Essence of Analgesia and Analgesics* provides practicing clinicians and physicians in training with an excellent guide to navigate the current state of affairs in analgesic pain management, and also highlights the trajectory of future pain medications. The authors have not only met the demands of the practicing clinician but also exceeded them in developing a comprehensive, portable text dedicated to guiding pain management specialists through the multiplicity of medication choices available to treat their patients.

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