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Perioperative Considerations and Positioning for Neurosurgical Procedures: A Clinical Guide, edited by Adam Arthur, Kevin Foley, C. Wayne Hamm. 287 pages. Published by Springer International Publishing, 2018. ISBN: 978-3-319-72678-6

Perioperative Considerations and Positioning for Neurosurgical Procedures: A Clinical Guide, edited by Arthur, Foley, and Hamm, is described as a clinical guide to intracranial and spine procedures in the supine, semi-sitting, sitting, lateral, and prone positions. Included in the guide are discussions surrounding operating room organization, preoperative assessment of the patient, and the indications, advantages, and complications of the various positions. The guide also addresses special considerations such as pregnancy, trauma, and pediatrics.

Because the contributing authors and editors are almost exclusively from a neurosurgical background, much of the preoperative discussion is devoted to surgical considerations such as types of beds, surgical supplies, neuro-navigation, and neuropathology. These concerns exceed the usual interests of the anesthetist. However, considerable time is taken in each chapter to discuss preoperative evaluation of the patient. Confirming that the patient is able (or not) to achieve the required positions for intubation and subsequent surgery, prior to sedation, is acknowledged to decrease postoperative complications. Communication between members of the perioperative team is repeat-

edly addressed in devising a safe and effective plan of care. Standards of care published by the American Society of Anesthesiologists, the Association of periOperative Registered Nurses, and the World Health Organization serve as the basis for creating that plan.

Individual chapters address each type of intraoperative patient position. Ideal surgical exposure related to specific patient pathology again exceeds the interest of most anesthetists. Related anatomy and physiology reviews are helpful in reviewing surgical and anesthesia considerations such as venous drainage, air embolism, ventilation-perfusion mismatch, and neuropathies. While anesthesia responsibilities related to injury prevention, monitoring, and fluid replacement are discussed, they are poorly organized and sometimes superficial. Much of the information crosses over from the intracranial to the spine chapters but may be an appreciated review for the anesthetist with little neuro-anesthesia experience.

It is noted that numerous grammatical errors occur throughout the text and a number of pictures are misidentified. This limitation might be overlooked if one is using the text only to refer to a specific chapter. Perhaps the greatest strength is the authors' use of a wide variety of photographs, drawings, and neuroimages, which greatly enhance the reader's appreciation of the material. These visual aids range from a patent drawing submitted in 1888 for an operating table to contrast magnetic resonance imaging scans of brain tumors and include many photographs of actual

patients in supine, semi-sitting, sitting, lateral, and prone positions.

Special attention is devoted to pediatric, obstetric, and trauma patients undergoing neurosurgical procedures. While the pediatric chapter is cursory, thermal regulation and differences in head immobilization are addressed. The trauma chapter uses a case study format. The first case study describes the trauma patient undergoing a neurosurgical procedure concurrent with thoracic, abdominal, or orthopedic stabilization. The second case study involves a trauma patient with morbid obesity and focuses on the positioning of morbidly obese patients in the prevention of postoperative complications, specifically ischemic optic neuropathy. In addition to surgical positioning, the obstetric chapter focuses on physiologic changes of pregnancy, aortic-caval compression, and evaluation of the fetus. The American Congress of Obstetricians and Gynecologists guidelines for fetal monitoring and diagnostic imaging are outlined.

In summary, this guide outlines a variety of perioperative considerations to both the neurosurgeon and the anesthetist when performing procedures in various patient positions. Despite the noted shortcomings, the guide contains some remarkable images that greatly enhance the reader's appreciation of the text. While the guide may not be targeted to an experienced anesthetist, it will have some value to practitioners whose neurosurgical experience is remote.

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