

Department of Anesthesia
Clerkship Rotation

Objectives

1. Understand the anesthetic considerations for a variety of medical conditions and demonstrate an appropriate preoperative assessment and optimization of the patient

1.1 Perform a relevant and focused medical history
1.2 Perform a relevant and focused physical examination
1.3 Perform a thorough assessment of the airway
1.4 Interpret basic laboratory investigations including CBC, Electrolytes, Blood Gas, ECG, Chest X-Ray
1.5 Present a focused problem list and assign an appropriate ASA physical status based on the patient assessment
1.6 Determine which medications to continue or to hold preoperatively (e.g. antihypertensives, antiarrhythmics; anticoagulants, oral antihyperglycemics)
1.7 List the recommended preoperative fasting guidelines and risk factors for perioperative aspiration
1.8 Counsel a patient regarding smoking cessation and its benefits within the perioperative context
1.9 Develop an anesthetic plan from suitable options for a given patient (e.g. General anesthetic, neuraxial anesthetic, regional anesthetic, MAC)
1.10 Describe the anatomic and physiologic changes of pregnancy and its impact on anesthetic management
1.11 Outline the anesthetic considerations in the pediatric patient and describe their impact on anesthetic management

2. Describe the major drug classes commonly used in the perioperative period

2.1 Illustrate the main therapeutic properties and side effects of the following drug classes. <i>Examples in parentheses.</i>
a) Benzodiazepines (<i>Lorazepam, diazepam, midazolam</i>)
b) Opioids (<i>Fentanyl, sufentanyl, morphine, hydromorphone</i>)
c) Intravenous anesthetic agents (<i>Propofol, Ketamine</i>)
d) Inhalational anesthetic agents (<i>Sevoflurane, desflurane</i>)
e) Muscle relaxants (<i>Succinylcholine, rocuronium</i>)
f) Local anesthetic agents (<i>Lidocaine, bupivacaine, ropivacaine</i>)
g) NSAIDs (<i>Ibuprofen, celecoxib</i>)
h) Vasoactive agents (<i>Phenylephrine, ephedrine</i>)
i) Antiemetic agents (<i>Dexamethasone, ondansetron, metoclopramide</i>)

2.2 Explain equianalgesic dosing of opioids and apply an appropriate dosing strategy of opioids in the perioperative period
2.3 Demonstrate and interpret twitch monitoring in a patient with neuromuscular blockade
2.4 Summarize the differences between amide and ester local anesthetics and list the maximum recommended dosages of common local anesthetics (<i>Lidocaine and Bupivacaine</i>)
2.5 Describe the signs and symptoms of local anesthetic toxicity and outline the initial management

3. Understand the principles of perioperative fluid assessment and integrate this knowledge within the framework of perioperative fluid and blood component therapy.

3.1 Demonstrate an appropriate preoperative fluid status assessment based on combined history, physical examination, and laboratory investigations
3.2 Describe the physiologic and pathophysiologic routes of fluid loss in the perioperative setting
3.3 Successfully insert a peripheral intravenous catheter
3.4 List the major components of the commonly-used crystalloid fluid solutions
3.5 Select an appropriate fluid and electrolyte replacement strategy based on anticipated and realized patient fluid and electrolyte deficits, ongoing losses, and maintenance requirements
3.6 Define the indications and complications of the various blood products (PRBC's, FFP, Platelets)
3.7 Determine the considerations when deciding to transfuse a blood product

4. Describe the principles of acute pain management

4.1 Explain multimodal analgesia
4.2 Identify the commonly used modalities for pain control and describe the advantages and limitations of each: Patient-controlled analgesia (PCA), epidural analgesia, peripheral nerve blockade, intrathecal opioids
4.3 Evaluate a patient's pain status using recognized assessment tools
4.4 Observe the insertion of an epidural
4.5 Participate in the placement of a spinal block
4.6 Discuss tailored analgesia strategies in the chronic pain patient presenting for surgery

5. Acquire the basic skills in airway management

5.1 Apply the predictors of difficulty in execution of each of the following: Bag-mask ventilation, LMA placement, direct laryngoscopy and intubation
5.2 Successfully bag-mask ventilate an unconscious patient
5.3 Recognize the signs of upper airway obstruction and demonstrate the appropriate corrective maneuvers: Placement of oral and nasal airways, head repositioning, jaw thrust and chin lift maneuvers
5.4 Successfully insert and confirm correct placement of an LMA under direct supervision
5.4 Independently prepare the appropriate equipment for intubation
5.5 Successfully intubate an anesthetized patient under direct supervision
5.6 Independently recognize the signs of unsuccessful endotracheal intubation
5.7 Identify the indications for endotracheal intubation and associated short-term and long-term complications

6. Demonstrate an understanding of the principles of emergency resuscitation and the role of each member of the health care team

6.1 Properly identify an emergency situation and call for assistance if applicable
6.2 Participate in the resuscitative effort in a supportive role under the direction of the supervising anesthetist
6.3 Demonstrate knowledge of proper patient assessment during an emergency using an ABC approach
6.4 Apply ECG leads and BP cuff to the patient with minimal required supervision

7. Demonstrate at all times the utmost professionalism towards patients and the health care team

7.1 Demonstrate appropriate professionalism skills including respect for patients and the health care team
7.2 Respect patient confidentiality, privacy, and autonomy at all times
7.3 Communicate (both written and verbal) clearly and in a concise and polite manner with patients and the health care team
7.4 Demonstrate self-directed improvement of knowledge and skills through selected readings and sought feedback from preceptors