

## **General OR Rotations**

### **GOALS & OBJECTIVES**

#### **Goals**

At the end of the CA 1 year General OR rotations, the resident should competently manage uncomplicated ambulatory, orthopedic, maxillo-facial, ENT, gynecologic, urologic, and plastic surgery procedures in Physical Status 1 and 2 patients. CA 2 year residents may be assigned to General OR rotations in Major Abdominal, Spine, and orthopedic regional cases and will additionally be expected to manage more complicated procedures in PS 3 or 4 patients.

#### **Objectives**

#### **Patient Care**

##### **CA 1**

##### **3 Months**

1. Perform a complete Pre-op anesthesia consultation in PS 1 and 2 patients
2. Perform routine Pre-op machine checkout
3. Check basic monitors and ensure proper function before induction
4. Prepare induction medications and airway equipment completely
5. Transcribe relevant information from patient chart in the Pre-op holding area
6. Identify patient using hospital protocol
7. Administer and records pre-op antibiotic at appropriate time
8. Examine airway using acceptable criteria
9. Place IV in  $\leq 2$  attempts
10. Calculate proper dosage for common induction agents
11. Assess muscle relaxant accurately with twitch monitor
12. Demonstrate acceptable mask ventilation skill: proper head position, mask placement, and hand-bag ventilation
13. Demonstrate acceptable intubation skills: laryngoscopy, intubation, tube placement, and confirmation of tube placement
14. Distinguish between adequate and inadequate ventilation
15. Competently perform induction in PS 1-2 patient
16. Competently assess extubation criteria and performs extubation in PS 1-2 Patients

##### **6 Months**

1. Effectively identify a difficult airway
2. Insert an LMA (Brain Video Technique)
3. Set-up and correctly use the anesthesia ventilator in volume control or pressure control mode in a PS 1 or 2 patient
4. Demonstrate adequate adjunctive mask ventilation skills: CPAP, jaw thrust maneuver, oral airway placement, and/or nasal airway placement
5. Correctly zero pressure transducer
6. Set-up Hotline fluid warmer
7. Change regulator on Oxygen tank
8. Program volumetric Infusion Pump

9. Prepare triple transducer for pressure monitoring

12 Months

1. Assess sedation using Ramsay scale or Observers Assessment of Alertness/Sedation
2. Transfuse blood and blood components safely: Checks each unit, Uses correct filter
3. Adjust drug doses for age and sickness
4. Appropriately assess extubation criteria for PS 3-4 patients
5. Prepare fiber optic bronchoscope for use in awake intubation
6. Use Glidescope to intubate
7. Use Elastic Bougie to intubate
8. Use or review use of Intubating LMA (online video)
9. Perform an awake/sedated intubation
10. Use Transport monitor
11. Demonstrate or use Transesophageal pacing
12. Demonstrate or use Transcutaneous pacing
13. Calculate Local anesthetic toxicities
14. Program syringe infusion pumps

Yearly POCT Certifications:

1. Glucometer certification \_\_\_\_ Completed
2. HemoCue certification \_\_\_\_ Completed

ENT Surgery

1. Difficult airway anesthetic induction
2. Place NIMs ET tube
3. Maintain inhalation anesthetic with no muscle relaxant
4. Manage anesthetic when OR bed repositioned 180°

Ambulatory Surgery

1. Effectively manage a normal airway
2. Insert an LMA
3. Administer Nausea/Vomiting prophylaxis

**CA 2**

Discuss the diagnosis and treatment

1. Allergic reaction to a medication
2. Acute myocardial ischemia
3. Airway obstruction
4. Bronchospasm
5. Pulmonary edema
6. Failed intubation
7. Supra ventricular tachycardia
8. Ventricular fibrillation
9. Ventricular tachycardia

10. Malignant hyperthermia: newly diagnosed
11. Severe hypertension

### Spine Surgery

1. Insert arterial line using aseptic/sterile technique in PS 1 or 2 patient
2. Effectively manage blood pressure in a spine surgery patient at risk for spinal cord ischemia
3. Turn patient from supine to prone and effectively maintain head-axial spine stability
4. Evaluate pressure points in prone position
5. Observe neurophysiologic monitoring techniques: SSEP's, MEP's
6. Skillfully prepare and manipulate fiberoptic bronchoscope
7. Perform TIVA anesthetic with no muscle relaxant

### **Knowledge**

#### **CA 1**

- Barash Chapter 46: Anesthesia for Ambulatory Surgery
- Barash Chapter 38: Anesthesia for Minimally Invasive Procedures
- Barash Chapter 40: Anesthesia for Orthopaedic Surgery
- Barash Chapter 34: Anesthesia for Otolaryngologic Surgery
- Barash Chapter 35: The Renal System and Anesthesia for Urologic Surgery

#### **Review the following topics:**

#### Anatomy of the larynx

- List the three functions of the larynx.
- Describe the sensory innervations of the larynx.
- Describe the innervations of the musculature of the larynx.
- Describe vocal cord position following recurrent laryngeal nerve injury.
- Describe vocal cord position following superior laryngeal nerve injury.

#### Laryngospasm

- List four treatments for laryngospasm.
- Describe the effect of hypoxemia and hypercapnea on laryngospasm.

#### Head and neck trauma

- Describe the presenting signs and symptoms of neck trauma.
- What is the preferred method for securing the airway for a patient with neck trauma?
- Define LaForte I, II, and III facial fractures.
- What is the incidence of dural tear with LaForte II and III fractures?

#### Difficult airway

- List five predictors of a difficult airway.
- Define the algorithm in ASA Guideline for Management of the Difficult Airway
- Describe the procedure for performing the following: superior laryngeal nerve block, glossopharyngeal nerve block, sphenopalatine nerve block.
- Describe three ways to apply local anesthetic to the trachea.
- List five techniques for managing the compromised airway.
- List three complications of transtracheal jet ventilation.

What is the recommended respiratory rate and I:E ratio when performing transtracheal jet ventilation?

Describe the advantages and disadvantages of a Montgomery T-tube.

#### Complications of tracheal intubation

What is the incidence of laryngeal injury following tracheal intubation?

List the hemodynamic consequences of tracheal intubation.

List five ways to blunt the hemodynamic response to tracheal intubation.

List six complications of tracheal intubation.

When should a patient be referred to an ENT if they develop hoarseness following surgery?

#### Cocaine

List two properties of topical cocaine.

Peak plasma concentration of cocaine occurs how long after administration?

What is the maximum safe recommended dose of nasal cocaine?

How much cocaine is in a drop of 4% cocaine solution?

Describe the two pathways of cocaine elimination.

#### Ear surgery

List the four nerves that innervate the ear and their sensory distribution.

Describe a regional anesthetic techniques to block the above-mentioned nerves.

What is the incidence of facial nerve paralysis following surgery on the ear?

Describe the technique for monitoring facial nerve function during ear surgery

Describe the effects on middle ear pressure of initiating and discontinuing N<sub>2</sub>O.

List three complications of using N<sub>2</sub>O during ear surgery.

How can N<sub>2</sub>O related complications be limited during inner ear surgery?

What is the maximum safe dose of epinephrine that can be used during halothane, isoflurane and sevoflurane anesthesia?

What is the concentration of epinephrine in micrograms/ml for the following epinephrine solutions: 1:1000, 1:10000, 1:100000, 1:200000?

#### **CA 2**

Barash Chapter 33: Anesthesia and the Eye

Barash Chapter 45: Anesthesia for the Geriatric Patient

Barash Chapter 36: Anesthesia and Obesity

Barash Chapter 37: Anesthesia and Gastrointestinal Disorders

Barash Chapter 39: Anesthesia and the Liver

Barash Chapter 41: Anesthesia and the Endocrine System

#### **Practice-based Learning and Improvement**

##### **CA 1 and 2**

Demonstrate ability to use a literature search to improve or justify practice

Monitor your effectiveness of performing any procedure in success rate/ total attempts

Describe one way to improve your success rate

Describe one way to decrease procedure time

#### **Interpersonal and Communication Skills**

##### **CA 1 and 2**

Provide 3 examples of essential communication within the care team

Demonstrate effective, organized work habits.  
Demonstrate a willingness to accept and capably respond to constructive feedback  
Listen and communicate effectively with patients and staff

**Professionalism**

**CA 1 and 2**

Demonstrate compassion, empathy, and respect for the dignity of patients  
Write post-operative notes and document patient outcomes  
Maintain honesty and reliability at all times

**Systems-based Practice**

**CA 1 and 2**

Properly label syringes used during procedure and secure medications after use  
Start antibiotics within one hour of incision and indicate start time on record  
Participate in University hand washing project  
Participate in Time-Out