

Core Regional Anesthesia Rotation

RA= Regional Anesthesia

The goals of this rotation are twofold. The first is to provide an opportunity for the resident to gain experience in selection and management of regional anesthesia in the perioperative setting. It is recognized that learning to place neuraxis and peripheral nerve blocks is dependent on the number of procedures performed, with continual learning and improvement during all rotations. However, during this rotation the resident can focus on improving these skills.

The second goal is to provide an opportunity for the resident to familiarize him/herself with equipment used for the performance of regional anesthesia and to increase his level of expertise and confidence in their use.

Goals

Patient Care:

- Develop the ability to effectively form and carry out a plan for surgical regional anesthesia
- Develop the ability to effectively form and carry out a plan for regional anesthesia utilized for acute pain management
- Develop the ability to effectively form and carry out a plan for RA for trauma and ICU patients

Medical Knowledge:

- Understand the different modalities currently available for the performance of RA, i.e. anatomy, paresthesia and stimulation based approach and ultrasound guided
- Understand the anatomy of neuraxis and peripheral nerves
- Understand pharmacology of local anesthetics and its adjuvants
- Understand indications and contraindication for regional anesthesia
- Understand the ASRA guidelines in regard to coagulopathy and the utilization of regional anesthesia
- Understand the importance of patient and surgeon collaboration
- Understand the role of sedation and monitoring during block placement
- Understand the risks and complications of regional anesthesia and, their diagnosis and treatments

Interpersonal and Communication Skills:

- Develop the ability to effectively communicate a regional anesthesia plan to a patient
- Develop the ability to effectively communicate a regional anesthesia plan to nursing staff and surgeons, including eliciting their participation and/or support as necessary.

Professionalism:

- Demonstrate care and compassion with patients, and responsiveness to patient concerns regarding regional anesthesia
- Demonstrate respectful and collaborative interaction with colleagues physician, coworkers and student rotating with RA rotation

Practice Based Learning and Improvement:

- Actively pursue current evidence to apply to cases of regional anesthesia
- Examine and assess experiences for ways to improve patient care

System Based Learning:

Understand the multidisciplinary organization and space utilization associated with safe, timely and successful performance of regional anesthesia

Objectives:

Patient Care:

- Formulate and execute a rational plan for utilization of regional anesthesia for surgery, post operative care, the ER and ICU
- Be able to perform efficient and safe RA techniques with the different existing modalities available, and discuss the possible complications
- Formulate a plan for appropriate sedation and monitoring during placement of regional anesthesia
- Formulate the different procedures to prevent complications of regional anesthesia
- Formulate a plan for dealing with catastrophic complications during regional anesthesia procedures
- Formulate a plan for the diagnose and the management of nerve damages after regional anesthesia
- Formulate a decision-making tree for the utilization of RA in patient with preexisting neuropathy or suffering from condition that would increase the risk of developing neuropathy related to RA
- Formulate a decision-making tree for the utilization of regional anesthesia in patient with local or systemic infection
- Formulate a decision-making tree for the utilization of RA in patient with different type and degree of coagulopathy and/or taking medication affecting their coagulation
- Formulate a rational plan for the management of a patients with neuraxial and peripheral nerve blocks

Medical Knowledge:

- Understand the basis physics of ultrasound and knowbology of the equipment related to RA
- Understand the utilization of nerve stimulation and related functional anatomy
- Describe the anatomy of the human neuraxis and peripheral nerves
- Describe the sonatomy of the spine and peripheral nerves and adjacent structures
- Explain the pharmacology of local anesthetic and drug selection for regional anesthesia including local anesthetics and its adjuvants
- Explain the different levels of sedation used during the placement of regional anesthesia and advantage and risk of the different levels
- Discuss monitoring during the placement of regional anesthesia
- Identify the general risk factors for complication of regional anesthesia
- Discuss the specific risk factors for complications for each block
- Explain the ASRA guidelines in regards to coagulopathy and the utilization of regional anesthesia in general and for specific procedures

- Debate the risks/benefits of regional anesthesia in patient with neuropathy or suffering from conditions that would increase the risk of developing neuropathy with RA
- Debate the risks/benefits of regional anesthesia in patient with local or systemic infection

Interpersonal and Communication Skills:

- Provide detailed explanation of the plans and procedure to patients in an clear, professional and compassionate manner
- Engage all team members in facilitating efficient use of regional anesthesia in the perioperative setting with minimal need for faculty intervention.
- Discuss the risk/benefits/alternatives of RA techniques with surgeons, nurses and patients demonstrating ability to serve as a consultant

Professionalism:

- Perform all clinical and educational duties in a timely collegial manner.
- Project adequate time for preparation to perform in an efficient compassionate manner.
- Document all procedures thoroughly in the ACGME case log system and in the patient's electronic and paper chart as appropriate.

Practice Based Learning and Improvement:

- Apply evidence based medicine about regional anesthesia to patients appropriately
- Follow outcomes of their blocks in their patients (success rates, complications, pain issues)
- Interpersonal and Communication Skills and Professionalism
- Communicate clearly with the patient in a manner that reassures the patient, and helps motivate their involvement in the utilization of regional anesthesia
- Communicate clearly, verbally and in writing, with other health providers (nurses and surgeons) regarding their participation in patient preparation and management for regional anesthesia
- Communicate clearly, verbally and in writing, with the acute pain service regarding their participation in patient management in the post operative period

System Based Learning:

- Compare and contrast the advantages and disadvantages of different techniques technique, e.i. epidural vs. pnb, different nerves blocks.
- Compare and contrast the advantages and disadvantages of different needle and catheters
- Compare and contrast the advantages and disadvantages of modality, ie. Nerve stimulation vs. ultrasound guidance
- Compare and contrast the advantages and disadvantages of different needle and catheters
- Explain the equipment for block placement and treatment of emergency complications
- Discuss the personnel requirements requirement and advantages, disadvantage of and dedicated block areas
- Describe the organizational requirements for regional anesthesia performance

Instructional Methods

- Out of OR rotation for 4 weeks
- Case planning with the designated regional anesthesia attending each day.

- Daily feedback and intraoperative teaching on blocks performed that day

Residents are responsible for planning the following days clinical activities, and presenting these plans to the designated regional anesthesia attending. The residents are expected to perform independent study (reading, atlases, web based education) to be prepared for the specific techniques planned. On day of surgery they are responsible to participate in faculty discussions regarding the specific blocks performed

Resident Assessment and Evaluation

- Daily evaluations by the faculty
- An evaluation of resident case logs through the ACGME case log system

Residents should complete an evaluation of the rotation. Suggestions for improvement of the rotation are encouraged and welcomed.