

REGIONAL ANESTHESIA ROTATION

The goals of this rotation are twofold. The first 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. The second goal 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.

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

Medical Knowledge:

- 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 as necessary.

Professionalism:

- Demonstrate care and compassion with patients, and responsiveness to patient concerns regarding regional anesthesia

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
- Be able to perform neuraxial and peripheral nerve blocks, 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 decision-making tree for the utilization of regional anesthesia in patient with neuropathy or suffering from multiple sclerosis
- Formulate a decision-making tree for the utilization of regional anesthesia in patient with local or systemic infection
- Formulate a rational plan for the post operative management of a patient with neuraxial and peripheral nerve block
- Formulate a plan for the diagnose and the management of nerve damages after regional anesthesia

Medical Knowledge:

- Describe the anatomy of the human neuraxis and peripheral nerves
- Explain the pharmacology of local anesthetic and drug selection for regional anesthesia including local anesthetics and its adjuvants
- Explain the appropriate levels of sedation used during the placement of regional anesthesia
- 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 multiple sclerosis
- Debate the risks/benefits of regional anesthesia in patient with local or systemic infection

Interpersonal and Communication Skills

Professionalism

Practice Based Learning and Improvement:

- Apply evidence based medicine about regional anesthesia to patients appropriately
- 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 needle and catheters
- Describe the use of nerve stimulation and ultrasound in nerve localization
- Explain the equipment for block placement and treatment of emergency complications
- Discuss the advantages, disadvantage and personnel requirements of dedicated block areas
- Describe the organizational requirements for regional anesthesia performance

Instructional Methods

- Assignment to cases in which there is known or planned indication for regional anesthesia
- Daily feedback and intraoperative teaching on blocks performed that day
- Residents are responsible for presenting the day before surgery to the attending the plan for regional anesthesia and read the specific techniques planned. On day of surgery they are responsible to engaging faculty in discussions regarding the specific blocks performed

Assessment and Evaluation

Residents will be assessed by:

- Daily evaluations by the faculty
- A record/tally sheet of completed types of block performed, including the level of faculty assistance required and success/failure rate
- Multiple choice and short answer test at the end of the rotation

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

References and Resources

www.nysora.com,
www.nerveblocks.net,
www.alrf.asso.fr/home_uk.htm,
<http://uianesthesia.com/rasci/>

Handout of relevant recent articles related to regional anesthesia – updated regularly

CDs on various block placement are available in the Department Library

Neural Blockade, Pain Management, Cousins, Bridenbaugh

Peripheral Nerve Blocks, Principles And Practice, Hadzic, Vloka

Peripheral Nerve Blocks, a Color Atlas, Chelly

Continuous Peripheral Nerve Block Techniques, Chelly, Casati, Fanelli