

Thoracic Surgery Rotation

General Objectives:

On completion of this rotation, the Vascular Surgery resident will become familiar with the presentation, pre-operative preparation, surgical management, and post-operative care of the thoracic surgical patient.

Specific Objectives:

MEDICAL EXPERT

Knowledge:

The resident must have a clear understanding of:

- The anatomy, embryology, physiology and pathology of the lung, pleura, tracheobronchial system, mediastinal esophagus and chest wall in healthy and diseased population.
- Natural history of treated and untreated surgical diseases of the non-cardiovascular thoracic organs, including benign and malignant lung and esophageal diseases, trauma, congenital anomalies, infection and their complications.
- General principles of pre-operative assessment, anesthetic management, post-operative monitoring and management of thoracic surgical patients.
- Principles of hemostasis and nutrition, including intravenous hyperalimentation, as they apply to the specialty.
- Knowledge of respiratory failure and support, including ventilators and membrane oxygenators.
- Interpretation, indication and complications of invasive and non-invasive diagnostic methods, including pulmonary function tests, esophageal function tests and diagnostic imaging.
- A general understanding of the role of endoscopy, thoracoscopy, laser and video-assisted (VATS) technologies in the diagnosis and management of thoracic surgical patients.
- A general understanding of the clinical scenarios, risk factors and management of trachea- innominate fistula

Clinical Skills:

The following clinical skills must be demonstrated by the end of the rotation:

- The resident must be able to elicit a history that is relevant, concise, accurate and appropriate to the patient's problem(s).
- The resident must be able to perform a physical examination that is sufficiently thorough and appropriate for the clinical problem.

- The resident should have an understanding of appropriate laboratory, functional and imaging procedures as they relate to pulmonary, esophageal and mediastinal/pleural pathology.
- Formulate an appropriate differential and provisional diagnosis
- Outline an appropriate plan of laboratory investigation
- Outline an appropriate therapeutic plan.
- Exhibit appropriate clinical judgement in outlining a differential diagnosis and an investigative and therapeutic plan, considering matters such as patient age, general health, risk and cost of investigative procedures, risk and cost of therapeutic interventions, and epidemiology of the diseases.

Technical Skills:

Technical and clinical competence in selected procedures commonly performed in general thoracic surgery, including the ability to select the procedure appropriate to the clinical situation, and to recognize his or her limitations.

Operative procedures that the resident should be able to perform under appropriate supervision by the end of the rotation include:

- Indications for all thoracic incisions, including median sternotomy, posterolateral thoracotomy, anterolateral thoracotomy, and emergency room thoracotomy.
- Closure of chest incisions
- Chest tubes including insertion and removal as well as the management of the drainage systems of chest tubes
- Manage patients with tracheostomy and/or laryngostomy
- Manage pleural effusions of a variety of etiologies including malignant, infectious and postoperative effusions
- Manage pneumothorax
- Manage air leaks in patients with prior chest surgery or trauma

Operative procedures on which the resident should be able to assist competently include:

- Closure and repair of the diaphragm
 - Management and treatment of thoracic duct injury and/or chylous leak
 - lobectomy/pneumonectomy, esophagectomy, gastrectomy, mediastinal mass excision, diaphragmatic repair

The resident should also understand the surgical principles of avoidance of thoracic nerve injuries

COMMUNICATOR

- Demonstrates communication skills necessary to obtain thorough, focused histories from patients, family members and other caregivers
- In the ambulatory clinic the resident must present patient histories and physicals with management plans to the attending surgeons
- Writes appropriate admission notes, consultation notes, operative notes, and daily progress notes in a timely fashion

- Dictates accurate and timely operative reports and discharge summaries
- Conveys pertinent information from the history and physical examination in different circumstances (over the phone, during ward rounds and conferences)
- Communicates specific risks and benefits to the patient, healthcare team and family about proposed cardiac surgical intervention
- Explains procedures at a level appropriate for patients and their families to understand in order to gain informed consent according to CMPA guidelines.

COLLABORATOR

- Understands the importance of collaboration with family physicians, surgical colleagues, other medical specialists, nurses and other hospital and community health care providers in achieving optimal comprehensive care for patients with vascular surgical problems and acknowledges their role and expertise.
- Understands principles and practice of team work on the ward, in the ICU and in the operating room
- Understands the role of each member of the healthcare team
- Understands the principles and practice of crisis resource management
- Is able to consult and delegate effectively
- Is able to hand over the care of a patient to another health professional to facilitate continuity of safe patient care

LEADER

- Understands and make effective use of information technology, such as methods for searching medical databases.
- Utilizes resources effectively to balance patient care, learning needs and outside activities
- Allocates finite health care resources wisely
- Sets realistic priorities and use time effectively in order to optimize professional performance.
- Understands the principles of practice management.
- Organizes ward and team appropriately to make most efficient use of time and personnel.
- Be able to assess and improve the quality of care provided personally or by others.
- Works effectively and efficiently in the health care organization
- Uses evidence-based medicine when appropriate
- Presents rounds on specific topics to assess cost effectiveness of treatment
- Institutes time management processes to promote work like balance

HEALTH ADVOCATE

- Implements patient safety practices (hand hygiene, medications on the ward, avoid dangerous abbreviations during medical prescriptions using the surgical pre-operative check list)

- Counsels' patients appropriately concerning exercise, diet, rehabilitation and smoking cessation
- Ensures patient has appropriate follow-up with family physician, wound clinic or thoracic surgeon
- Is aware of the factors beyond surgical care that contribute to quality of life for patients. Examples include the use of tobacco and lifestyle choices that contribute to the development of diabetes or aggravate the management of diabetes in addition to the principles of primary and secondary prevention of cardiovascular disease
- Understands the specialist role to intervene on behalf of patients with respect to the social, economic and biologic factors that may impact on their health.
- Understands the specialist role to intervene on behalf of the community with respect to the social, economic and biologic factors that may impact on community health.
- Identifies situations where advocacy is appropriate

SCHOLAR

- Prepares for teaching rounds, ward rounds and operating room cases with learning principles and evidence-based medicine
- The resident should critically evaluate patient outcomes and participate actively in morbidity rounds and mortality rounds
- Demonstrates a strategy to learn the basic science and clinical aspects of thoracic surgery as outlined in this document and develop, implement and monitor a personal continuing education strategy.
- Develops the capacity to access and apply relevant information as well as new and current therapeutic options to clinical practice
- The resident should pose questions that will provide the basis for clinical research.
- The resident should keep an operative log of all surgical procedures.

PROFESSIONAL

- Demonstrates integrity, honesty, compassion and respect for diversity.
- Fulfills medical, legal and professional obligations of the specialist.
- Meets deadlines, is punctual, monitors patients and provides follow up.
- Understands the principles of ethics and apply these in clinical situations.
- Applies code of ethics as outlined by the Collège des Médecins
- Exhibits appropriate personal and interpersonal professional behavior

Revised and approved by RPC on September 6, 2024