



TRANSFUSION MEDICINE ROTATION

THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA

Objectives of Training and Specialty Training Requirements in Anesthesia

Specific Objectives in CanMEDS Format

OVERALL GOALS

The goal of the Transfusion Medicine rotation for trainees in anesthesia is development of an understanding of the common anemias and coagulopathies, their treatment, and their implications for anesthetic management. In addition, experience in hematologic laboratory testing methods and interpretation will be stressed.

ROTATION OBJECTIVES

At the completion of training, the resident will have acquired the following competencies and will function effectively as:

Medical Expert/Clinical Decision Maker

Specific Knowledge Requirements

The resident will be able to:

- Describe the physiology of oxygen carrying by the blood.
- Describe the physiology of inadequate oxygen delivery by the blood and the treatment of this.
- List the various types of anemia, along with their etiology, and describe their pathophysiology.
- Describe the usual acute and long term management and therapeutic measures (including blood transfusion) used to treat these anemias.
- Describe the coagulation pathway.
- List the disorders of hemostasis and describe their pathophysiology and treatment.
- Describe the laboratory tests used in evaluating anemia and coagulopathy, along with their indications, interpretations and limitations.
- List the indications for transfusions of the various available blood products, and in conjunction with this, describe the physiologic effects of transfusions of the various blood products, including their side effects and the management of these.
- Describe the perioperative risk factors for patients with hematologic diseases undergoing surgery.
- Describe the necessary preparation and premedications for patients with hematologic diseases undergoing surgery.



Specific Skill Requirements

The resident will:

- Have sufficient working knowledge of the following laboratory tests in order to be able to describe how they are performed and interpret the results. The resident will be expected to perform some tests in those categories marked with an asterisk (*).
 - Tests of hemostasis* and thrombosis (including coagulation screening, DIC fibrinolysis tests and platelet disorders).
 - Automated hematology tests (CBC/differential) and basic blood morphology.
 - Special hematology tests* (eg. hemoglobin, electrophoresis/sickledex, tests for hemolysis).
 - Immunohematology tests* (eg. blood typing, antibody investigation).
- Have a working knowledge and have participated in the collection of blood for transfusion purposes, the separation of the various blood products from the collected whole blood sample, and the preparation and storage of the individual blood products.

Communicator

The resident will be able to:

- Develop communication skills with other members of the health care team to benefit the patient.
- Describe the social concerns regarding blood transfusion including:
 - Autologous donation
 - Directed donation by family members
 - Review of Jehovah's Witnesses
- Discuss the changing views in society regarding the safety of blood products.

Collaborator

The resident will be able to:

- Describe the roles of the people participating in the donation and collection of blood for transfusion and its storage and delivery to recipients.
- Be aware of the role of the hematologist consultant in perioperative management of the surgical patient.

Manager

The resident will be able to:

- Consider health care resources when determining the transfusion management plan.
- Acknowledge the difficulties and decision-making involved in utilization and allocation of finite health care resources.

Health Advocate



The resident will be able to:

- Provide appropriate education to ensure patients are well informed and well prepared.
- Encourage patients to optimize their health status.

Scholar

The resident will be able to:

- Teach medical students, under supervision of staff, about clinical problems.
- Demonstrate critical enquiry of a clinical question that they have raised or that has appeared during teaching discussions.

Professional

The resident will be able to:

- Demonstrate integrity and honesty when interacting with patients, families, and other health care professionals.
- Be punctual, efficient, and respectful at all times.

Evaluation

The resident will receive daily feedback from clinical preceptors. The resident will be expected to complete a rounds presentation once per rotation. An end-of-rotation written evaluation will be completed by both the resident and clinical preceptor. The resident evaluation will be discussed with the resident and signed by both the resident and the preceptor.

Reviewed: July 2012, Dr. Granton