AIM

To introduce clerks to clinical anaesthesia including: peri-operative assessment and optimization, monitoring techniques, management in acute medical care including resuscitation, acute pain, and application of basic science to clinical problems.

SCHEDULE

Find out your clinical assignment at HDH or KGH Hospitals (KGH or HDH) for the first day of the Anesthesia rotation by enquiring at the Department of Anesthesia office (KGH Victory 2, or 548-7827) by the Friday before the rotation commences. Clerk packages will be available the Wednesday afternoon before your core rotation.

On the first day of the rotation the clerk will report at 0730 hours to the OR at their assigned hospital. Note that the KGH and HDH may have different statutory or union generated holidays. Please call the department office at 7827 to confirm your allocation for that day on the Friday beforehand.

Clerks will be assigned during all or part of each day to the OR, Obstetrical Unit, Acute pain service, or Outpatient Clinics for a variety of experience. The clerk is usually expected to complete the day in the assigned location. However, this may be altered if better learning opportunities present. The clerk may be assigned for parts of a day to areas such as Obstetrical Anesthesia for special experience or instruction. If a list finishes earlier than expected the clerk may be reassigned to another list. If you find that you have not been assigned contact the Anesthesia departmental office (KGH 7827) for clarification. You will be assigned somewhere each day! During one evening) the clerk will be allowed to remain with the Anesthesiologist(s) on call to sample the experience of anesthesia under ‘emergency’ conditions. Call is assigned by the departmental office. Contact the OR Manager at KGH 7071. You are expected to have an evaluation form filled in for this on call period.

§ Clerks are required to be in their assigned operating room each morning one half hour before scheduled (0800 hrs) start time. N.B. The operating rooms start at 8.30 on Wednesdays due to Grand Rounds.

§ Mandatory Rounds

Wednesdays, Grand Rounds, 0700 hrs in Richardson Amphitheatre (cancelled during the summer)

Fridays, Clinical Case Management Rounds, 0700 hrs at KGH in Victory 2 Conference Room

§ Mandatory Teaching Sessions

Anesthesia teaching sessions which include:: Pre-op Assessment, Acute Pain Management, and Airway Management and Ventilation Strategies are part of Perioperative teaching schedule shared with Emergency Medicine and Surgery are posted on the web for each individual block. Attendance will be taken. Failure to attend these sessions will be noted on the overall Clinical Performance Evaluation.

§ Call

Clerks will spend one evening (evaluations required) with the anesthesia team on-call to see the problems associated with "emergency anesthesia". Evening call begins at 1530 hrs nless there is a mandatory teaching session scheduled. In this case call would begin immediately after the teaching session ends. Please inform the staff (7071) or resident pager (53-100), if you will be delayed due to a teaching. Clerk’s evening call ends before 2400 to allow return to work the next day.
CLINICAL EVALUATION

§ All clerks are expected to have evaluated their patients preoperatively and recorded that evaluation on each patient’s anesthesia record. ‘Same Day Admission’ and ‘Outpatient’ charts are available for review in the “Same Day Area” on the afternoon prior to scheduled anesthesia. These patients will also be assessed immediately prior to anesthesia. Clerks are also expected to assess any ‘in-patients’. These will be identifiable as either TBA or have a designated floor beside their name on the OR list. Clerks will be evaluated on their assessment of the patients and asked to formulate an anesthetic plan.

N.B. The clerk must assess all patients before the OR list starts. It is unprofessional behaviour to arrive in the operating room with no knowledge of the patient and expect to be allowed to have active participation in their care.

To benefit from the rotation clerks should read sections of “Anesthesia for Medical Students” or “Handbook of Clinical Anesthesia” pertaining to the rotation objectives. They should also supplement reading by QUESTIONING THE FACULTY TUTORS, observation, and clinical practice. Clerks are asked to ensure that their faculty tutor(s) record and deliver to them, for feedback and safekeeping, their evaluation sheet each day or evening. Each clerk will collect and hold all these evaluation sheets for presentation at the end of rotation evaluation.

OBJECTIVES & EVALUATION CRITERIA (E. C.)

In the clinical areas of the Operating Room, Recovery Room, Obstetrical Suite, Clinics and Wards of the hospitals:

1. The Clerk will perform a pre-anesthetic assessment of each patient and demonstrate a basic understanding of the interactions of the patient’s physical status, medications, proposed surgery, and anesthesia during that patient’s intra & post-operative course.

   E. C. - In the operating room the Clerk will determine the ASA physical status of each patient; and in oral presentation describe potential problems (e.g. CVS, Resp, Airway, Endocrine, etc.) and indicate possible outcomes. Notes or Handbook

2. The clerk will observe and when appropriate perform on several occasions:
   a. Airway management in anesthetized and post anesthetic patients; Handbook pp 42-56
      i. without apparatus,
      ii. using apparatus such as mask, pharyngeal airway or laryngeal mask airway,
      iii. using endotracheal intubation.

   E. C. - The student will demonstrate several successes with each technique; and be able to describe how to verify a clear airway with each method.

   b. Vascular cannulation venous (possibly arterial) paying full attention to methods of making the procedure painless. Notes

   E. C. - The Clerk will demonstrate venous (several), and if possible, arterial cannulation(s).

   c. Intravenous Regional Anesthesia of the arm using the “Bier Block” technique. Notes or Handbook

   E. C. The clerk will know the reason for using lidocaine for a Bier Block of the arm, its correct dose and concentration, and know the reason for the required tourniquet time. Notes

3. The Clerk will observe and demonstrate a basic understanding of:
   a. Techniques for the maintenance of hemodynamic stability in the patient considering;
      i. pre-existing cardiovascular and blood volume status,
      ii. the effects of anesthesia and surgery,
      iii. fluid requirements for maintenance and the requirement for surgery or trauma,
      iv. appropriate hemodynamic monitoring.
E. C. - In the operating room the Clerk will demonstrate the ability to prescribe appropriate fluid therapy, describe methods of monitoring the adequacy of this therapy for each patient, and indicate knowledge of changes required for pediatric or adult patients. Notes or Handbook pp 89-95, 120-125

b. Techniques for the maintenance of adequate ventilation and oxygenation
   i. pre-existing pulmonary function, Handbook pp 277-278
   ii. ventilatory requirements both adult and pediatric patients,
   iii. complications of positive pressure ventilation,
   iv. effects of anesthesia and surgery,
   v. effect of postoperative pain,
   vi. monitoring the adequacy of ventilation. Handbook pp 63 - 68

E. C. - In the operating room the Clerk will demonstrate the ability to ensure appropriate ventilation of each anesthetized patient. 
- In the recovery room the Clerk will demonstrate an elementary ability to assess the adequacy of ventilation of each post operative patient considering the effects of anesthesia, surgery, and pain and indicate appropriate remedial measures if necessary. Handbook pp 479 - 481

c. The use of drugs for resuscitation.
   E. C. - The Clerk, in oral presentation, will describe drugs used for resuscitation, their indications, doses related to body size, and side effects. Handbook pp 524-525, 595

4. The Clerk will observe patients with Perioperative Pain to gain an elementary understanding of the anatomy, physiology, psychology of pain, and appropriate methods for the control of pain.
   E. C. - The Clerk will describe and if appropriate perform methods by which an individual patient's postoperative pain may be managed. Notes or Handbook pp 484 - 496

5. The Clerk will discuss, and if possible observe Obstetrical Anesthesia considering these topics:
   a. Regional anesthesia using local anesthetic and/or opioids for analgesia considering its indications, contraindications, effects, problems, and relevant sensory pathways.
   b. General anesthesia in use for obstetrical anesthesia considering its indications, contraindications, effects, and problems.
   c. Other methods of pain control in labour considering indications, contraindications, efficacy, and problems.
   E. C. - List the major indications and contraindications for each technique.
   Notes or Handbook pp 374 - 384

6. The clerk will demonstrate an elementary knowledge of the following factors as they pertain to the use of Local Anesthetic agents, and observe the clinical use of Regional Anesthesia:
   a. The various uses of local anesthetics (e.g. lidocaine) in clinical medicine,
   b. Important factors affecting the kinetics of local anesthetic agents,
   c. Dose of local anesthetic (lidocaine) for its several uses,
   d. Toxicity of local anesthetic agents, its prevention and treatment,
   e. Additives used with local anesthetic preparations, their purpose and toxicity.
   E. C. - In oral presentation the clerk will demonstrate an elementary knowledge of the dose of local anesthetic (the clerk's choice of local anesthetic) for the main clinical uses of an agent of this class (antidysrhythmic and local anesthesia); and indicate methods to prevent &/or treat local anesthetic toxicity. Notes or Handbook pp 203-218

**EVALUATION of CLERKS**

The Anesthesiology Clerkship Curriculum at Queen's is designed around ten general objectives with evaluation criteria based on these objectives. The evaluation is intended to facilitate learning by focusing student attention on the knowledge required. Performance evaluation will include "elaborative questioning", a technique demonstrated to improve the integration of new information with prior knowledge and promote deeper understanding of concepts resulting in enhanced learning. Daily
evaluation of students’ skills and knowledge by both direct observation and by oral questioning will be recorded each day. This evaluation is intended primarily to facilitate learning (through elaborative questioning) but is the basis for final evaluation report. Completed daily evaluation forms are to be given to the clerk each day and held by the clerk for presentation to the Clerkship Co-ordinator for summation at the end of rotation.

An end of rotation examination will be required. It will consist of a multiple-choice examination.

EVALUATION OF PROGRAM

To ascertain the degree of success that a program has in attaining its goals requires the answer to a number of questions, which can only be answered by the students. Clerks in this program are expected to fill out an end of rotation evaluation at the end of the block.

EVALUATION OF CLERKS’ KNOWLEDGE & PERFORMANCE

Level of performance expected is that reasonable for the duration of the rotation

1. Evaluation - attendance is required each day, all day.
   a. Summative evaluation of each of the criteria will be made at the end of the rotation based on the daily evaluations, weighted more heavily on evaluations from the final week.
   b. The Faculty supervisor(s) each day will evaluate on one or more of the specified criteria. All faculty are expected to give feedback to students.
   c. Expectations for a "PASS" on an Evaluation Criterion are that knowledge and technical skills be at a level reasonably attainable during the rotation.
   d. Evaluation of skill may be used for "CERTIFICATION", indicating a probable ability to perform that skill successfully on a usual, non-challenging, case. It is not indicative of an 'expert' skill level.

Daily evaluation slips must be completed for each day and evening i.e. 11 slips are to be handed in on the final day of your two week rotation on Anesthesia including call. You should retain all evaluation slips until then. Do not leave them with the Attending. These evaluation slips are your responsibility. You will not be allowed to sit the exam at the end of the Perioperative block without them and an overall evaluation will not be completed. If you have a problem concerning completion of these slips please inform Rosa ASAP and we will try and address this. Final Evaluations and Marks for the rotation will only be given after the clerk has returned to the Department the “Handbook of Clinical Anesthesia” (if one was borrowed) and all paperwork required of their rotation.

FINAL EXAMINATION: Written on the last day of the Perioperative Block in conjunction with the OSCE and Emergency Medicine written exam. The anesthesia exam consists of : 25 MCQ questions.

EQUIPMENT

Clerks are expected to bring their own stethoscopes.

REQUIRED READING

Patterson L.J. (2000) Anaesthesiology Clerkship Rotation Handbook: notes covering the course objectives are issued to all clerks.

“Anesthesia for Medical Students” (LOANER)

Each clerk will be offered loan of the Handbook for reference..