Minimally Invasive Gynecologic Surgery Rotation
Royal Victoria Hospital and Jewish General Hospital

Orientation to Rotation

- **Rotation duration**: One 4-week block at RVH during PGY3
  This rotation is part of the 12 week Reproductive Endocrinology and Infertility training, i.e. 8 weeks ART plus 4 weeks MIS; additional training in MIS is possible as a Selective rotation.

- **Rotation supervisor**: Dr. Togas Tulandi;
  - **Contact Dr. Tulandi by email** (togas.tulandi@mcgill.ca) 1-2 weeks before rotation to confirm the place of the meeting
  - **On the first day report for orientation with Objectives of Training document**

- **Schedule**: During this rotation, the Resident is expected to participate in the clinical activities, rounds etc. indicated in below:

<table>
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<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>Surgery</td>
<td>Surgery or clinic</td>
<td>Teaching</td>
<td>Grand Rounds</td>
<td>Clinic</td>
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<tr>
<td>7:45 am RVH</td>
<td>7:45 am JGH</td>
<td>Dr. Tulandi’s office</td>
<td>8-9 am RVH or JGH</td>
<td>10:30 am RVH</td>
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<td>RVH F6.01</td>
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<td>Rounds 12.30-13.30</td>
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<td>Surgery</td>
<td>Clinic</td>
<td>Office hysteroscopy</td>
<td>Clinic</td>
<td>Resident Teaching</td>
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<tr>
<td>RVH</td>
<td>9:00 am RVH</td>
<td>1:00 pm</td>
<td>9:00 am JGH</td>
<td>2:00-5:00 pm RVH F3.10</td>
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* Residents should conduct rounds the day after surgery for admitted patients.
* Discussion at the end of each clinic or surgery
* Schedule changes from week to week

Evaluation

- The resident will be required to contact Dr. Togas Tulandi for midway feedback.
- Rotation supervisor Dr. Togas Tulandi will be responsible for organizing face-to-face feedback at the end of every four week block.
- The final evaluation will be posted on MRESone45.

Recommended reading

- TeLinde's Operative Gynecology (Eds. JA Rock, Jones HW III), Lippincott Williams & Wilkins, 2008
Specific Objectives and CanMEDS competencies

The role of medical expert is central to the function of the obstetrician-gynaecologist, and draws on the competencies for the roles of scholar, communicator, health advocate, manager, collaborator, and professional.

1. Medical Expert

a) KNOWLEDGE of the Medical Expert
At the end of rotation, the resident will:
   i. Demonstrate that he/she possesses knowledge appropriate to the area of his/her special interest:
      • In understanding the status of standard clinical practice methods in Minimally Invasive Gynecologic Surgery (MIGS)
      • An awareness of current literature and ideas, which concern MIGS.
      • An awareness of the deficiencies and problems within MIGS.
   ii. Have knowledge of the indications, safety, complications, and limitation of endoscopic surgery as well non-surgical alternatives.
   iii. Acquire a working knowledge of advanced gynecologic endoscopic operations including the indications, safety, complications, and limitation of endoscopic surgery as well non-surgical alternatives.

b) SKILLS of the Medical Expert
At the end of rotation, the resident will:
   i. Demonstrate the technical capabilities, including interview and examination, appropriate laboratory or diagnostic procedures, expected therapeutic or rehabilitative procedures. Demonstrate the appropriate use of those technical capabilities and the ability to interpret, synthesize, and integrate the data derived in the approach to the patient's problem.
   ii. Apply diagnostic and therapeutic skills of MIGS for ethical and effective patient care.
   iii. Be able to provide consultation with respect to patient care, education and, to a certain extent, ethics to other physicians, patients and allied health professionals.
   iv. Be able to conduct a:
      • Diagnostic laparoscopy,
      • Laparoscopic hydrotubation.
      • Laparoscopic ovarian cystectomy.
      • Tubal ligations
      • Laparoscopic adhesiolysis
      • Diagnostic hysteroscopy
      • Operative hysteroscopy including myomectomy and endometrial ablation
   v. They should have an understanding of how to conduct and have participated in performing a laparoscopy myomectomy and hysterectomy, and have an understanding of tubal re-anastomosis.
   vi. Manage and schedule preoperative testing, consultation with other specialties if needed.

2. Communicator
   a) Demonstrate a body of knowledge and skills deemed to be common to all areas of medicine:
      i. History taking.
      ii. Physical examination.
      iii. Emergency care
iv. Appropriate responses and initial management of acute gynecological conditions.
b) Demonstrate the ability to establish and maintain an effective doctor-patient relationship. He/She should be able to explain to the patient in lay language the nature of the problem. He/she should give her the options in management. This allows the patients to maintain their autonomy and empowers them to influence the decision. The final decision should be theirs in collaboration with the physician.
c) Demonstrate the ability to communicate with patients, their families, and the community. Develop a compassionate understanding of the patient’s needs, background; explain the nature of disease in a conscientious manner; involve relatives appropriately.
d) Demonstrate the ability to gain respect from the patients and their relatives and to be culturally sensitive.
e) The resident must then develop a management plan including expectant management, surgical or non-surgical treatment.

3. Collaborator
a) Demonstrate the ability to contribute and collaborate with others.
b) Demonstrate respect among professional disciplines and be aware the various strengths and capabilities of the different professionals involved in health care.
c) Understand the relationship between general medical disease and surgery.
d) Recognize his/her own limitations and collaborate with other specialties including anesthesiologist, general surgeon, urologist, gastroenterologist and other specialties.
e) The resident must learn to establish a good rapport with the operating room staff and other health professionals including the pathology and laboratory personnel.

4. Manager
a) Demonstrate the ability to use resources effectively and efficiently to balance patient care, to allocate resources wisely, to work effectively and efficiently in health care organization, to utilize information technology to optimize patient care and lifelong education, and to manage clinical practice.
b) Relationship to Health Care Team: The resident must utilize the health care team appropriately i.e., support mutual academic activities; work with professional colleagues regarding vacation time, share of workload, service activity, and awareness of patient care.
c) Administrative Skills: The resident must show efficient organization of his/her time. This would include punctuality and ability to allow appropriate time for self-learning, adequate preparation for journal club, research, and clinical assignments.
d) Organize the patient booking and preparation of the patient before surgery.
e) Coordinate if needed preoperative treatment, consultation pre or postoperatively with other specialties and prescribe postoperative management and follow-up.
f) Have an appreciation of psychological, emotional, cultural, sexual, ethical, health economics, and social aspects of surgery.

5. Health Advocate
a) Demonstrate the ability to identify issues in human health and illness in the following manner:
   i. Identify the existence of any such problem when it confronts him/her.
   ii. Identify the appropriate resources to solve the problems not in his/her area of training or expertise.
b) Demonstrate the ability to solve problems that are in his/her sphere of knowledge or activity, or arrange for the solution of those problems that are not in this specialty area. In this goal, there is the implication of personal responsibility. Examples would be resident’s responsibility towards perusing the solutions to problems that may be more than just the immediate medical issue including drug abuse, or marital problems.
c) Demonstrate the ability to contribute to improved health of patients and communities, and to recognize
and respond to issues where advocacy is appropriate.

d) Advocate for the concepts of indicated-surgery.
e) Advocate the concept of minimally invasive surgery.

6. Scholar
a) Demonstrate the attitudes and habits necessary to ensure his/her continuing self-directed learning, and continuing medical education. This implies seeking information from archival sources, resource persons, colleagues, peers, regular reading, and study.
b) Contribute personally to the improvement of residency, medical, and community programs in which he/she is involved.
c) Demonstrate the ability to critically appraise medical literature, and to facilitate learning of patients, students, and allied health professionals.
d) Demonstrate the ability to contribute to development of new knowledge by presentations and publications
e) Use evidence based data for patient’s management.
f) Understand the importance of quality assurance.
g) Use the data for clinical investigations.

7. Professional
a) Demonstrate awareness of his/her strengths, weaknesses, and feelings as they relate to his/her activities. Demonstrate a willingness to modify his/her own behavior, if possible, appropriate to the activities in his/her specialty area.
b) Demonstrate responsibility and intellectual honesty; do not hesitate to report the facts about patients, including errors. Maintain the respect of colleagues and the confidence of patients by putting patient welfare ahead of personal considerations. Manifests increasing ability to accept the appropriate level of responsibility for patient care. Recognize limitations and be able to seek help from others (and profit from the counsel). Demonstrate acceptable demeanor in appearance appropriate to the educational or clinical setting.
c) Demonstrate the ability to deliver highest quality of care with integrity, honesty, compassion, and ethics, and to exhibit appropriate personal and interpersonal professionalism.

Specific Objectives

A. Anatomy
1. Know the anatomic structures of the pelvis, including the bony structures, muscles, major blood vessels, and nerves.
2. Know the pelvic viscera, their anatomic relationships to one another, and to other pelvis structures.
3. Have a basic understanding of the embryology of the pelvic viscera.
4. Know the layers, vascular supply, and nerve supply of the abdominal wall.
5. Know the course of the ureter and the major vessels through the lower abdomen and pelvis.
6. Know the structures of the pelvic floor and their relationship to structures visualized at laparoscopy.
7. Know the anatomic landmarks of the anterior abdominal wall to safely introduce the principal and accessory trocars.
8. Know the anatomic landmarks of the abdominal/pelvic cavity and its organs.
9. Recognize normal versus abnormal anatomy, organs, and disease processes of the peritoneal space.

B. Instrumentation
1. Understand alternative video-cameras, light sources and insufflators available.
2. Be familiar with instruments to access peritoneal cavity; Veress needle, trocars.
3. Be familiar with forceps for grasping, holding, manipulating, dissecting, and tying.
4. Understand the use of needle holders, curved, straight, and fine for micro suturing.
5. Have a basic understanding of the physics behind electrosurgical instrumentations; unipolar forceps, needles, probes.
6. Be familiar with irrigators/aspirators, irrigating fluids.

C. Operative Laparoscopy
1. Know the role of laparoscopy in the diagnosis and management of gynecologic disease.
2. Understand the advantages and disadvantages of laparoscopic surgery in gynecology.
3. Be aware of various approaches to establish a pneumoperitoneum; i.e. entry sites.
4. Be familiar with open and closed laparoscopy.
5. Understand the disposable and reusable instruments.
6. Know how to diagnose and understand how to manage endoscopic complications.

D. Operative Hysteroscopy
1. Know the anatomy and physiology of the cervical canal and endometrial cavity.
2. Understand the properties of the different fluid distension media, their complications, and their treatments.
3. Be familiar with automated fluid management systems, fluid pumps, and other ancillary information used in hysteroscopy.
4. Understand the principles of continuous flow hysteroscopic instrumentation.
5. Know the indications, methods and complications associated with the following: endometrial ablation, hysteroscopic myomectomy, lysis of intrauterine adhesions, incision/excision of uterine septum, hysteroscopic tubal cannulation.

E. Benign Gynecology
1. Recurrent pregnancy loss
   a. Describe the causes of recurrent pregnancy loss and the diagnostic testing.
   b. Describe congenital uterine malformations and role in recurrent pregnancy loss.
   c. Describe surgical procedures to treat congenital uterine malformations.
   d. Understand the principles of uterine septum resection.
   e. Describe causes and diagnosis of Asherman’s syndrome.
   f. Understand the principles of lysis of synechiae.
   g. Describe the role of myomas in recurrent pregnancy loss and accurately counsel patients.
   h. Perform hysteroscopic myomectomy.
   i. Understand the role of hydrosalpinx in infertility and treatment options.
2. Sterilization
   a. Describe the methods of tubal ligation, how to perform them, and the failure rates.
   b. Perform tubal ligation.
3. Abnormal Uterine Bleeding
   a. Describe causes of abnormal uterine bleeding and appropriate tests for accurate diagnosis.
   b. Perform office hysteroscopy.
   c. Treat abnormal uterine bleeding medically.
   d. Perform operative hysteroscopy and endometrial ablation.
   e. Describe types of endometrial ablation including risks and success.
   f. Describe pros and cons of different modes of hysterectomy (abdominal, vaginal, laparoscopic assisted vaginal, laparoscopic supracervical and total laparoscopic).
   g. Participate in laparoscopic assisted vaginal hysterectomy and total laparoscopic hysterectomy.
4. **Adnexal Masses**
   a. Describe differential diagnosis of adnexal masses and appropriate testing to confirm diagnosis.
   b. Describe management options of functional vs. pathologic ovarian cyst.
   c. Perform laparoscopic ovarian cystectomy for benign adnexal path including endometrioma, dermoid cyst, fibroma, and paratubal cyst.
   d. Describe management options for tubo-ovarian abscess and role of laparoscopy.
   e. Describe appropriate evaluation and treatment for hydrosalpinx.
   f. Perform salpingectomy.
   g. Describe the evaluation of adnexal masses in pregnancy. Describe optimal timing of surgery and the use of the laparoscopic approach in pregnancy.

5. **Uterine Myoma**
   b. Describe indication for treatment of uterine masses.
   c. Describe role of uterine myoma in infertility and pregnancy.
   d. Describe treatment option for myomas including success and risks.
   e. Have knowledge of uterine artery embolization.
   f. Perform hysteroscopic resection of myoma.
   g. Understand the principles of and participate in laparoscopic myomectomy.

6. **Chronic Pelvic Pain**
   a. Describe causes of pelvic pain and the evaluation indicated to make an accurate diagnosis.
   b. Have a basic knowledge of treatment options and their success for chronic pelvic pain.

7. **Endometriosis**
   a. Describe pathogenesis theories and common symptoms of endometriosis.
   b. Describe common physical exam and ultrasound findings for endometriosis and the role of other testing.
   c. Describe medical management alternatives and their success in infertility pain management.
   d. Have a basic knowledge of ASRM staging system and its limitations.
   e. Perform operative laparoscopy for endometriosis. Perform ablation of endometriosis and peritoneal resection of endometriosis.
   f. Perform ovarian cystectomy and/or ovarian ablation for endometrioma.
   g. Understand the principles of endometriosis involving the bladder, ureter, colon, small bowel, or diaphragm.

**F. Medico-legal Issues**
   1. Understand the definition of medical malpractice.
   2. Be aware of procedures/situations which create increased risk for litigation.
   3. Know the meaning of and practice true informed consent.
   4. Develop excellent documentation/charting skills.
   5. Know the appropriate methods for decreasing the risk of litigation when complications occur.