Educational Topic 41: Gynecologic Procedures

Rationale: Evaluation and management of gynecologic problems frequently requires performing diagnostic and therapeutic surgical procedures. Understanding the risks and benefits of such procedures is important in counseling patients about their treatment options.

Intended Learning Outcomes:

A student should be able to:

- Describe the key components of pre-operative evaluation and planning, including history, physical examination, and informed consent (including risks, benefits, and alternatives)
- Describe common measures for the prevention of infection, deep venous thrombosis and other perioperative complications
- Describe the components of postoperative care
- Discuss common postoperative complications
- Describe the communication of operative findings and complication to patients and family
- Describe the key members of an operating room team
- Describe key components of a preprocedural or preoperative time out
- Understand how surgical management can emotionally impact patient and their family
- Describe common outpatient and inpatient gynecologic procedures with her indications and possible complications
  1. Pelvic ultrasonography
  2. Colposcopy and cervical biopsy
  3. Excisional procedures of the cervix
  4. Vulvar biopsy
  5. Endometrial biopsy
  6. IUD insertion and removal
  7. Contraceptive implant placement and removal
  8. Dilation and curettage
  9. Hysterosalpingogram
  10. Hysteroscopy
11. Laparoscopy
12. Tubal ligation
13. Hysterectomy and bilateral salpingo-oophorectomy
14. Pregnancy termination

- Demonstrate the ability to complete procedural tasks
  1. Sterile technique
  2. Foley catheter insertion
  3. Basic suturing
  4. Knot tying

**TEACHING CASE**

The patient is a 40 year-old G0 woman who has menorrhagia due to a fibroid uterus. She has anemia with a hematocrit of 27% despite oral iron therapy. She has periods lasting 10-12 days each month. She also suffers from lupus and anti-phosphlipid antibody syndrome, diagnosed when she was 25. Her manifestations mostly are arthritis, but she has a history of a deep venous thrombosis (DVT) 6 years ago. Although her lupus currently is not flaring, she takes prednisone 5 mg per day as well as coumadin 2.5 mg per day. She does not have other medical problems and her only other surgery was a tonsillectomy at age 16, during which she was told she had “more than usual bleeding” but did not require transfusion. She desires definitive surgical management with hysterectomy. She is married, works as an office manager, and never had children. Her physical exam shows BP 120/70, weight of 160, height of 5’6”. She has a number of small bruises on her extremities. Her uterus is palpable just under her umbilicus, but is non-tender. Pelvic exam is only significant for the enlarged uterus. Pelvic ultrasound confirms a large fibroid uterus, normal ovaries. Labs show INR of 2.5, normal chemistry panel.

**COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:**

Competencies addressed:
- Patient Care
- Medical Knowledge
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

1. Describe the consent process for surgery for this patient.

   - Pneumonic PREPARED
     - Procedure
     - Reasons for the procedure
     - Expectations of the patient for day of surgery, post operative course, outcome, risks and recovery
     - Preference of the patient for type of management
     - Alternatives, including other procedures and medical management
     - Risks, both general and those specific to the patient
     - Expense, both medical and loss of work, worst case scenario
     - Decision

2. What are the main surgical risks facing this patient?

   - Main intraoperative risks include: Hemorrhage, possible need for transfusion, damage to organs such as bladder, bowel, ureter
• Main post-operative risks include: infection; thromboembolism; lupus flare

3. What steps can you take to try to avoid these risks?

• Providers can consider pre-operative transfusion, intravenous iron, or using intraoperative blood salvage machines to decrease the risk of need for post-operative transfusion.
• Discontinuation of her anti-coagulation (Warfarin) should be discussed with the physician who manages this medication. Some patients will require a bridging anticoagulant perioperatively.
• This patient is considered high risk for perioperative DVT as she is having major surgery and has additional risk factors. High risk patients should receive: Intermittent pneumatic compression device; or low-dose Heparin perioperatively
• This patient should receive single-dose antimicrobial prophylaxis preoperatively

4. Which other health professionals would you consult both pre- and post-operatively?

• Consultation and communication with the patient’s physician managing her health issues is key. The provider can consider consultation with Hematology for management of anti-coagulation and Rheumatology for management of her lupus.
• The provider should alert the Anesthesiology team of this patient’s high risk status.

5. What measures can you take post-operatively to assess for and diagnose complications?

• Clinical signs of hemodynamic stability are key: blood pressure, pulse, pulse oximetry, and urine output are often signs that can indicate hemodynamic instability or other post-operative concerns. Elevated temperature can indicate possible infection. The physical exam can also be very useful in the assessment of a patient post operatively. Clinical signs may indicate the need for labwork such as complete blood count (CBC), blood cultures, or urinalysis.

6. During the patient’s hysterectomy, there was an incidental cystotomy which was repaired intraoperatively. Describe how you would communicate this information to the patient and family.

• Disclose information promptly and honestly
• Express sorrow and apologize, and accept responsibility
• Outline the plan of care used to rectify the problem, and postoperative expectations
• Document all discussions with the patient and their family members
• Offer follow-up meetings
• Be prepared for strong emotions

7. Who are the key members of an operating room team?

• The primary surgeon and his/her assistants
• The scrub: this is a member of the team who is sterile during the procedure and can assist with handling instruments and other needed sterile equiptment
• The circulator: This is a member of the team who is not sterile, but whose primary responsibilities include charting, as well as providing the sterile operating team with needed supplies.
• The Anesthesiologist or Nurse Anesthetist
8. What are the key components of a surgical time out?

- To improve surgical safety worldwide, the World Health Organization (WHO) recommends the following components of a preoperative time out:
  - Confirm that all team members have been introduced by name and by their role.
  - Surgeon, anesthesia professional, and nurse verbally confirm the patient's identity, surgical site, and procedure.
  - Surgeon reviews any critical or unexpected steps, operative duration, and anticipated blood loss.
  - Anesthesia team reviews any patient-specific concerns.
  - Nursing team reviews confirmation of sterility, including indicator results; equipment issues or concerns; whether antibiotic prophylaxis has been given within the last 60 minutes, if applicable; and whether essential imaging is displayed, if applicable.

REFERENCES


ACOG Practice Bulletin 84, Prevention of Deep Venous Thrombosis and Pulmonary Embolism, August 2007 (reaffirmed 2013)

Hebert, PC, Levin, AV, Robertson G, Bioethics for clinicians: 23 Disclosure of Medical Error; CMAJ 2001 64(4).
