UNIT 5: NEOPLASIA

Educational Topic 53:
Uterine Leiomyoma

Rationale: Uterine leiomyomas represent the most common gynecologic neoplasm and often lead to medical and surgical intervention.

Intended Learning Outcomes:
A student should be able to:

• Cite the prevalence of uterine leiomyoma
• Identify symptoms and physical findings in patients with uterine leiomyoma
• Describe the diagnostic methods to confirm uterine leiomyomas
• Describe the management options for the treatment of uterine leiomyomas

TEACHING CASE

CASE: A 42-year-old G3P3 woman presents with a history of abnormal bleeding and pelvic pain. She was well until approximately age 35, when she began developing dysmenorrhea and progressive menorrhagia. The dysmenorrhea was not fully relieved by NSAIDs. Over the next several years, the dysmenorrhea and menorrhagia became more severe. She then developed intermenstrual bleeding and spotting, as well as pelvic pain, which she describes as a constant feeling of pressure. She also complains of urinary frequency. Past gynecological history is otherwise non-contributory. She delivered three children by Caesarean delivery, the last with a tubal ligation at age 30. Her past medical history is unremarkable.

Physical examination reveals a well-developed, well-nourished woman in no distress. Vital signs and general physical exam are unremarkable. Abdominal examination reveals an irregular-sized mass extending halfway between the pubic symphysis and umbilicus and to the right of the midline. Pelvic exam reveals a normal appearing vagina and cervix. The uterus is markedly enlarged and irregular, especially on the right side where it appears to reach the lateral pelvic sidewalls. The adnexae are not palpable given the size of the mass.

Beta HCG is negative. CBC reveals hemoglobin of 10.3 and hematocrit of 31.2%. Indices are hypochromic, microcytic. Serum ferritin confirms mild iron deficiency anemia. Pap test is reported negative for malignancy, adequate for evaluation. Ultrasound shows multiple large intramural fibroids, filling the pelvis and extending into the lower abdomen. The
mass does extend into the right side of the pelvis. There is mild hydronephrosis on that side. The ovaries are not visualized. Endometrial biopsy reveals proliferative endometrium.

COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:
Competencies addressed:
- Patient Care
- Medical Knowledge
- Practice-Based Learning
- Systems-Based Practice

1. What are the likely causes of the mass prior to imaging?
   - The most common cause of a large irregular uterine mass is uterine leiomyomata. The clinical picture is typical of a patient with fibroids. The physician must be sure that the patient does not have ovarian neoplasm. Usually this is accomplished when the ultrasound confirms the diagnosis of fibroids.
   - The differential diagnosis for a pelvic mass includes physiologic cysts, infection (tubo-ovarian abscess), benign and malignant neoplasms, adenomyosis, endometriosis, and masses related to other abdominal/pelvic organ systems.

2. What is the prevalence of leiomyoma in different populations of women?
   - Uterine leiomyomas are very common
   - Prevalence is high, with up to 70% of Caucasian women and greater than 80% of African American women have evidence of leiomyomas by the age of 50

3. Describe the pathological changes of leiomyomata.
   - Well-circumscribed, non-encapsulated myometrium confirms the diagnosis of fibroids. It is a benign neoplasm.
   - A leiomyosarcoma will have at least 10 abnormal mitoses per high power field, and is diagnosed histologically typically after surgical removal by way of hysterectomy/myomectomy.
   - Fibroids are common; leiomyosarcoma is very rare
   - Pathological diagnosis is made for a patient who undergoes surgery. Biopsy for fibroids is not indicated.

4. Discuss the appropriate management of women with fibroids.
   - Expectant management is acceptable if intervention is not warranted by the symptoms. No intervention is needed for women with asymptomatic fibroids. Many women with fibroids are asymptomatic.
   - Provider should discuss patient’s desire for fertility when planning treatment.
     - The most frequent presenting symptoms of uterine fibroids are bleeding, pressure symptoms, pain, and urinary complaints.
     - Fibroids can be subserosal, intramural or submucosal. Submucosal fibroids are frequently associated with bleeding.
   - Pregnancies in women with fibroids are usually uneventful. Fibroids can grow during pregnancy, which may impact fetal growth and mode of delivery.
   - Fibroids are rarely a cause of infertility. There are specific criteria for the use of myomectomy in infertile patients.
   - Oral contraceptives or progestins may be utilized to control bleeding.
   - GNRH agonists may be utilized preoperatively.
A levonorgestrel containing intrauterine device can be effective for pain and bleeding in a uterus up to 10 weeks size.

Hysteroscopic resection
Uterine ablation
Uterine artery embolization
Myomectomy
Hysterectomy

5. What are the indications for hysterectomy in women with fibroids?

• Failure of prior conservative therapies to relieve symptoms
• When her symptoms have an impact on daily activities
• Excessive uterine bleeding
  ▪ Profuse bleeding, clots or periods > 8 days
  ▪ Symptomatic anemia due to the blood loss
• Pelvic pain caused by the fibroids
  ▪ Acute and severe
  ▪ Chronic lower abdominal or back pressure
  ▪ Bladder pressure causing urinary frequency

REFERENCES

