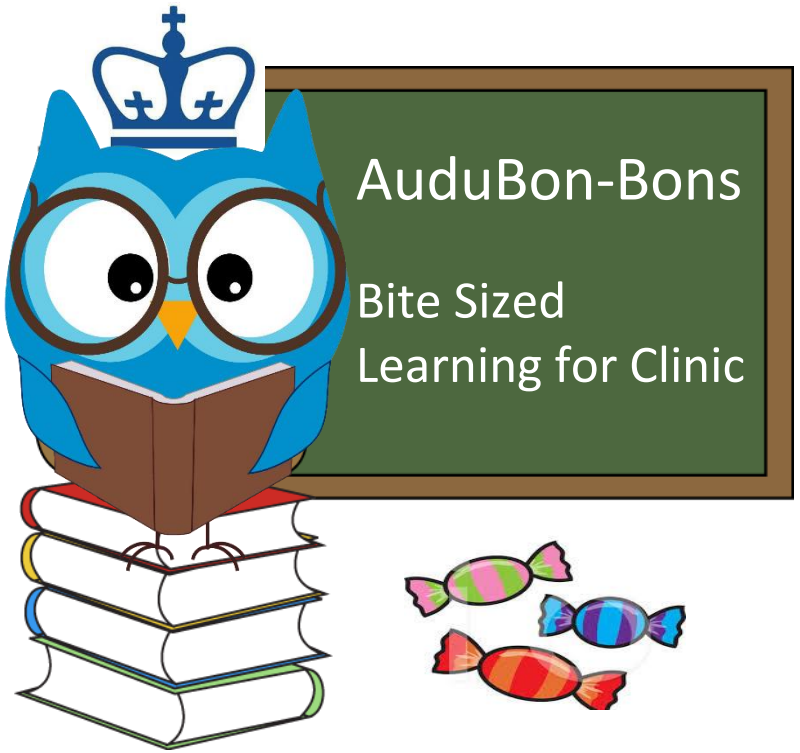
SYMPTOMATIC FIBROIDS



Week 91

Prepared by: **Annie Fu, MD**

Reading Assignment: ACOG Practice Bulletin 96, "Alternatives to Hysterectomy in the Management of Leiomyomas"

LEARNING OBJECTIVES

- Review common clinical presentations of fibroids
- Review basic clinical evaluation of fibroids
- Understand management options, including expectant, medical, and surgical management options

CASE VIGNETTE

Patient is a 24 y.o. G0 woman who presents with a six-month history of worsening menorrhagia and pelvic pressure. She reports worsening fatigue but no other symptoms.

She reports monthly cycles lasting 10 days. She reports passage of clots, saturating 8 pads a day. She also reports a “heaviness” in her lower abdomen and urge to void frequently, but no incontinence.

FOCUSED HISTORY

What elements of this patient's history are most relevant?

- **POBH:** G0
- **PGYNH:** Menarche at 12yo; regular monthly cycles; denies STIs, fibroids, cysts, or abnormal paps
- **PMH:** Denies
- **PSH:** Denies
- **FH:** Denies
- **SH:** No toxic habits; denies IPV; accepts blood
- **Meds:** Multivitamin
- **All:** NKDA

PERTINENT PHYSICAL EXAM FINDINGS

What elements of this patient's physical exam are most relevant?

VS: P 99 BP 95/60 **Wt:** 70 kg **Ht:** 170cm **BMI:** 24.2 kg/m^2

- **General:** NAD, mild pallor
- **Chest:** CTAB
- **CVS:** RRR
- **Abdomen:** soft, nontender, mobile mass in lower abdomen
- **GU**: NEFG; cervix WNL, nulliparous, no lesions or discharge; uterus enlarged, bulky 20 week size, nontender; no palpable adnexal masses

FIBROIDS: BACKGROUND

- Uterine leiomyomas are the most common solid pelvic tumors in women
- Two most common symptoms of leiomyomas
  - **Abnormal uterine bleeding** (heavy and prolonged menses)
    - Can cause Fe-deficiency anemia, affect quality of life
    - Bleeding may be affected by location of the fibroid (submucosal, intramural, cervical fibroids more associated than subserosal)
  - **Pelvic pressure**
- Other symptoms
  - Other bulk symptoms
    - **Urinary symptoms**: frequency, incomplete voiding, sometimes obstruction of urinary tract
    - **Constipation**
    - Venous compression (VTE as presenting symptom in 4% of patients with fibroid uterus in one study)
  - **Dyspareunia**
  - **Dysmenorrhea**
  - **Pain** secondary to fibroid degeneration
  - **Infertility, obstetric complications** (recurrent pregnancy loss, placental abruption, IUGR, malpresentation, PTL/PTD)

CLINICAL EVALUATION

- History and physical
- Lab evaluation as per AUB workup
  (see AuduBon-Bon on abnormal uterine bleeding)
- Imaging
  - TVUS is first line
  - Saline infusion sonography
  - MRI (for complex presentations, surgical planning in complicated procedures)
  - Hysteroscopy

DIFFERENTIAL DIAGNOSIS

- Benign etiologies
  - Fibroids
  - Adenomyoma
  - Leiomyoma
  - Adenomyosis
  - Polyp
  - hematometra
- Malignant etiologies
  - Leiomyosarcoma
  - Endometrial carcinoma
  - Carcinosarcoma
  - Endometrial stromal sarcoma
- Pregnancy

MANAGEMENT

- Options depend on fertility goals, benefits and risks of non-hysterectomy methods, risks of recurrence after conservative/medical management

- Expectant management and the natural history of fibroids
  - **Premenopausal women**
    - Varying degrees of regression and growth; 7-40% regress over 3 years in one study
    - Postpartum regression
  - **Postmenopausal women**
    - Most women experience regression and amenorrhea
    - Women who use HRT: HRT may lead to modest increase in volume only, but **no impact** on clinical symptoms
  - Requires periodic assessment
  - Candidates include those who are seeking pregnancy, asymptomatic, peri-/post-menopausal
  - Rapidly enlarging fibroids is not an indication for surgery; risks of sarcoma in this population is the same as in women without enlarging fibroids
    - FYI, risk factors for sarcoma: prior pelvic RT, tamoxifen use, genetic syndromes

MEDICAL MANAGEMENT

- **NSAIDs**
  - Effective for dysmenorrhea only, but data in women with fibroids and dysmenorrhea is lacking
- **Hormonal contraceptives**
  - Usually first-line, but most effective only in the short-term; large crossover to surgical management
  - COCs and progestin-only methods both may reduce risk of developing clinically significant fibroids; however, some studies have shown increase in fibroid size with progestin therapy
  - LNG-IUS use associated with higher rates of expulsion and spotting
- **GnRH agonists**
  - 35-65% reduction in fibroid volume within 3 months
  - Amenorrhea in most women
  - Leuprolide acetate is **FDA approved** for preoperative therapy in women with anemia
  - Side effects of pseudomenopause and decreased bone density limits use to **6 months without addback therapy**
  - Addback therapy leads to increase in uterine volume up to 95% of baseline within 24 months
- **GnRH antagonists**
  - Elagolix is **FDA approved** for treatment of HMB due to fibroids; marketed with addback therapy (also used for endometriosis-associated pain)
  - Does not have initial steroidal flare that agonists have

MEDICAL MANAGEMENT (cont.)

- **Aromatase inhibitors**
  - Act by blocking ovarian and peripheral estrogen production
  - Rapid effects (lowers estradiol levels after 1 day of use)
  - NOT FDA approved and data is lacking
- **Progesterone modulators**
  - Progesterone receptor blockers
  - Mifepristone has been shown to reduce fibroid volume 26-74%, amenorrhea up to 90%
    - Side effects: endometrial hyperplasia without atypia, transient elevated LFTs
  - More information is needed

SURGICAL MANAGEMENT

- **Myomectomy**
  - Abdominal myomectomy: similar risks compared to hysterectomy
    - Improves menorrhagia and pressure (up to 81% resolution)
    - Risk of recurrence: women with a single fibroid-27% recurrence, 11% requiring hysterectomy; women with multiple fibroids-59% recurrence, 26% requiring hysterectomy/repeat myomectomy
    - Risk of hysterectomy < 1%
  - Laparoscopic myomectomy
    - Faster recovery compared to abdominal mmx but requires surgical expertise, more operative time
    - Pregnancy rates: 57-69%
    - Risk of recurrence: 11.7% after 1 year and 84.4% after 8 years; reoperation rate of 6.7% at 5 years, 16% at 8 years
    - Complication rate: 8-11%
  - Hysteroscopic myomectomy: for submucosal fibroids
    - Success rate at 1 year, 94.6%; at 5 years, 76.3%
    - Reoperation rates 5-15%
    - Complication rates 1-5% (fluid overload, bleeding, perforation, gas emblism, infection)
    - Most successful with Type 1 submucosal fibroids (
- **Hysterectomy**
  - Only definitive treatment
  - Usually performed after failure of more conservative managements techniques
- **Preoperative adjuncts**
  - GnRH agonists improve hematologic parameters, shorten hospitalization, decrease EBL, operative time, postop pain; administered 2-3 months preop
  - GnRH antagonists, NOT FDA approved, but reduce volume 25-40% in 19 days; no initial steroidal flare
- **Intraoperative adjuncts**
  - Vasopressin infiltration in myometrium can decrease blood loss in mmx

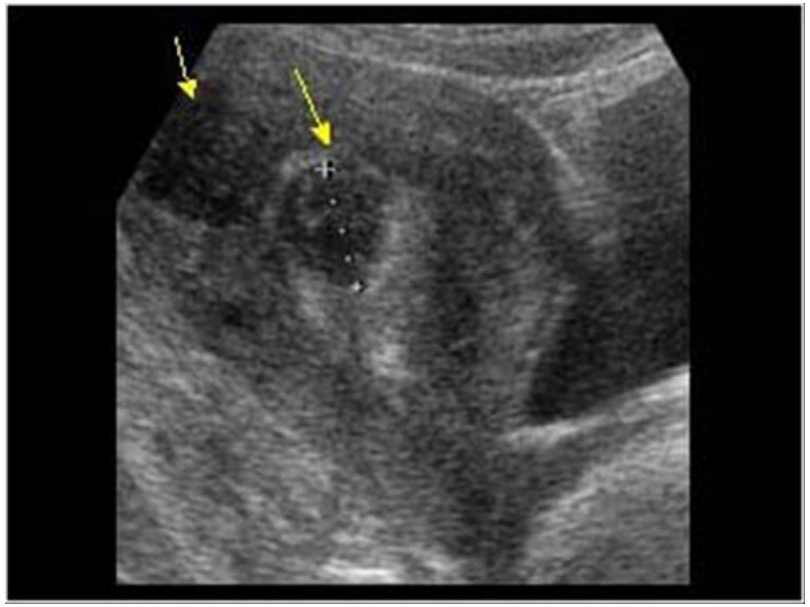
Submucosal fibroids:
-Type 0: intracavitary
-Type I: <50% intramural
-Type II: >50% intramural

SURGICAL MANAGEMENT (cont'd)

- **Uterine Artery Embolization**
  - Reduction of fibroid volume up to 42% at 3 months
  - Similar complication rates with hysterectomy; shorter hospital stay, quicker return to work; but higher readmission rates, vaginal discharge, fibroid expulsion, hematoma
  - Possibly higher rates of treatment failures compared to surgical management; up to 20% reoperation rate
  - For women who desire pregnancy, UAE a/w decreased ovarian reserve, abnormal placentation (12% risk); but, limited data available only
- **MRI-guided ultrasound surgery**
  - Non-invasive approach; modest reductions in volume; long-term data needed

CASE, continued

- How would you work-up this patient?
- How would you manage this patient if she does not desire future fertility? If she does?



https://www.ultrasoundcases.info/uterine-fibroids---leiomyomas-984/

SOCIAL DETERMINANTS OF HEALTH

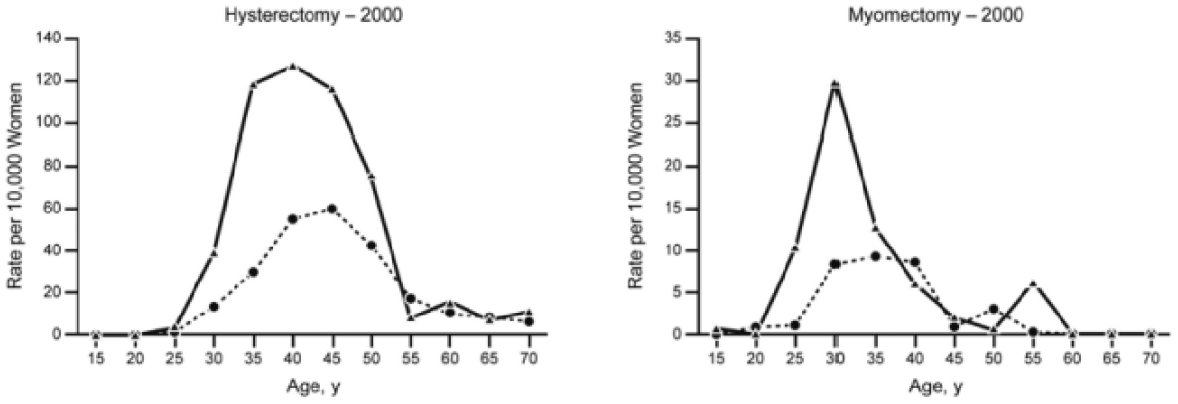


Figure.
Resource utilization by age and race (based on data from National Hospital Discharge Survey, National Ambulatory Medical Care Survey, and National Hospital Ambulatory Medical Care Survey only). Solid line denotes black women; dotted line, white women. (Adapted from Flynn et al [25]. Used with permission.)

Eltoukhi et al, 2014

- **African American women are 3 times at risk of having fibroids compared to white women**
- **African American women are more likely to have symptomatic fibroids at an earlier age and undergo surgical management at an earlier age than white women. They are also more likely to have fibroids affect their overall reproductive health, fertility, and ART outcomes**
- **White women are more likely than African American, Hispanic, Asian and other ethnic minority women to undergo laparoscopic hysterectomy/minimally-invasive surgical management, even when socioeconomic status was the same. African American women also experience postoperative complications at twice the rate white women do**

It is imperative as healthcare providers to assess and offer appropriate treatment to African American women to improve overall gynecologic health

EPIC .PHRASE

BBonFibroidMgmt

Description: Fibroid management counseling

We discussed the natural history of fibroids, symptoms associated with fibroids, and treatment options, including expectant, medical and surgical options.

We reviewed expectant management with the patient. ***For premenopausal women, there are varying degrees of regression, with studies showing rates between 7-40%. ***For postmenopausal women, most women experience regression and amenorrhea after cessation of menstruation.

We reviewed medical management with the patient. We discussed first-line use of hormonal contraceptives for management of bleeding symptoms. Hormonal medication such as combined hormonal options, progestin-only pills, levonorgestrel-IUD, depo-provera injection were discussed, including the risks/benefits/alternatives for each option. We discussed the use of GnRH agonists/antagonists for management of heavy menstrual bleeding, the duration of use, and side effect profiles for each; we discussed use of these medications as adjuncts to surgery.

We reviewed surgical management with the patient, including definitive management with hysterectomy. ***For those desiring future fertility, we reviewed myomectomy as an option for treatment. Reviewed different approaches, including hysteroscopic, laparoscopic, and abdominal myomectomy techniques, and candidates for each approach. We also discussed uterine artery embolization for those who wish to preserve their uterus; we reviewed the increased risk of treatment failure with UAE, as well as pregnancy complications in the future, such as abnormal placentation, decreased ovarian reserve.

***For those not desiring future fertility, we reviewed hysterectomy for definitive management and different surgical approaches, including vaginal, laparoscopic, and abdominal hysterectomy.

The patient's questions were answered and she opted for *** for management.

CODING AND BILLING

- **ICD-10**
  - **D25.9 Leiomyoma of uterus, unspecified**
    - **D25.0,** Submucuous leiomyoma of uterus
    - **D25.1,** Intramural leiomyoma of uterus
    - **D25.2,** Subserosal leiomyoma of uterus
- **CPT**
  - **99213**, established outpatient office visit
  - **99214,** if attending is present

EVIDENCE

- Alternatives to hysterectomy in the management of leiomyomas. ACOG Practice Bulletin No. 96. American College of Obstetricians and Gynecologists. Obstet Gynecol 2008;112:387–400.
- Stewart A et al. Uterine fibroids (leiomyomas): epidemiology, clinical features, diagnosis, and natural history. Barbieri R et al ed. UpToDate. Waltham, MA: UpToDate, Inc. https://www.uptodate.com/contents/uterine-fibroids-leiomyomas-epidemiology-clinical-features-diagnosis-and-natural-history
- Stewart A. Uterine fibroids (leiomyomas): treatment overview. Barbieri R ed. UpToDate. Waltham, MA: UpToDate, Inc. https://www.uptodate.com/contents/uterine-fibroids-leiomyomas-treatment-overview
- Eltouhi H et al. The health disparities of uterine fibroids for African American women: a public health issue. Am J obstet Gynecol. 2014 Mar; 210(3): 194-199.