

**Harvard Medical School's Center of Excellence in Women's Health**  
Vexing Clinical Issues in Women's Health

**Uterine Fibroids**

Yvonne Gomez-Carrion, M.D.  
Beth Israel-Deaconess Medical Center

Elizabeth A. Stewart, M.D.  
Brigham and Women's Hospital

**MEDICAL IMPACT**

Uterine fibroids are a common problem, detected clinically in 25% of all women and pathologically in uterine specimens of 75% of women. Black women appear to have earlier onset and more severe disease. Fibroids are the leading cause of hysterectomy, which accounts for \$1.2 billion in costs annually. Considering their clinical and economic impact, fibroids have not received adequate study. A range of treatment options in addition to hysterectomy is now available, sometimes resulting in confusion among patients and physicians about the best course of therapy for an individual woman.

**DEFINITION**

Fibroids are benign fibromuscular tumors that may be located in various positions within the uterus. Their position often determines a patient's presenting symptoms, which may include abnormal uterine bleeding, pelvic pain or pressure (so-called "bulk" symptoms), and urinary symptoms (rarely, including ureteral compression). Fibroids are influenced by hormonal factors, particularly endogenous estrogen and progesterone levels.

**CLINICAL ASSESSMENT**

In addition to objective measures of fibroid size and location by pelvic ultrasound, determination of the type of symptoms ("bulk" symptoms or bleeding symptoms, or both) is critical. The effect of fibroids on a woman's quality of life may be assessed by questions such as:

- What is your worst day like?
- Do your fibroids keep you home from work?
- Do you urinate frequently?
- Are you experiencing increased constipation?
- Are you experiencing increased pelvic pressure?
- Do you have problems when you lie on your belly to exercise?
- Are you bothered by your appearance (because of increased abdominal size) when you are intimate with a partner? Do you experience pain when intimate with a partner?

MRI is useful mainly in situations in which there is a concern for uterine sarcoma, a poor response to minimally invasive treatment, or when a woman presents with pain symptoms that seem disproportionate to fibroid size.

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**CHOICE AMONG TREATMENT OPTIONS**

Factors influencing choice of treatment include:

- level of symptom severity
- desire for preservation of fertility
- desire for preservation of reproductive organs
- estimated age until menopause
- size, location, and number of fibroids
- medical and surgical factors
- likelihood of fibroid recurrence after treatment
- a woman's preferences for type of treatment, including duration of expected recovery period.

**Medical therapy**

Although the oral contraceptive pill is often used as a first step to treat bleeding symptoms in the presence of fibroids, there is little evidence to establish efficacy for fibroid-related bleeding.

The progestin IUD (Mirena) has clear benefits for reducing menorrhagia, but studies of its efficacy for women with bleeding caused by fibroids are limited. Anatomical factors such as the presence of submucosal fibroids may preclude its use.

**Minimally invasive surgical options**

**Uterine artery embolization (UAE)** occludes the blood supply to fibroid tumors, leading to a decrease in fibroid symptoms. The presence of submucosal fibroids increases the risk that they will be expelled vaginally following UAE. The likelihood of permanent impairment of ovarian function increases with age, and the safety of UAE in women desiring future pregnancy has not been determined. The ideal candidate for UAE is a woman with both bulk and bleeding symptoms who has a modestly enlarged uterus without submucosal fibroids, and is perimenopausal (where impairment of ovarian function is an advantage).

**Myomectomy** is effective for menorrhagia (in 80%) and results in the reduction of pelvic pain/pressure in 40 to 90%. However, fibroids recur frequently, resulting in the need for another surgical procedure in 20% of women. Myomectomy may be performed hysteroscopically when the fibroid is inside the uterus (submucosal) and can be accompanied by endometrial ablation for bleeding symptoms. There are limited efficacy data on the effectiveness of ablation alone for treatment of fibroids. In addition, myomectomies can be done via laparotomy or laparoscopy depending on the location of the fibroid(s).

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**MRI-guided focused ultrasound** was approved by the FDA in 2004 for treatment of symptomatic fibroids in premenopausal women with no desire for future fertility. The procedure is available at a limited number of centers in the U.S. Early data on efficacy indicate improvement in symptoms of bleeding and/or pain in 70% of women. Post-procedure pain complications appear less than with UAE.

**Hysterectomy** remains a definitive treatment for fibroids. A variety of surgical approaches may be used, including laparoscopic, vaginal, and total abdominal hysterectomy.