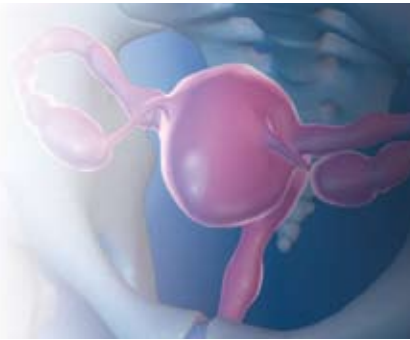


Managing Abnormal Uterine Bleeding

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Abnormal uterine bleeding remains a significant health issue for women worldwide. Traditionally, hysterectomy has been the treatment of choice when excessive menstrual bleeding remains unresolved after conservative medical management. In an attempt to provide a less invasive alternative to hysterectomy, first-generation endometrial ablation techniques (eg, rollerball) were developed 20 years ago. Although extremely effective these first-generation systems were highly dependent on operator skill, with operative risks including uterine perforation, cervical laceration, and intraoperative fluid overload resulting in electrolyte abnormalities. As surgery and technology evolved, second-generation endometrial ablation devices were developed in an effort to simplify the ablative process while providing efficacy that parallels traditional hysteroscopic modalities. The second-generation devices were designed to require less skill and training, and to utilize local anesthesia.

PREOPERATIVE EVALUATION

Prior to determining viable treatment options for patients with abnormal uterine bleeding, a detailed medical history should be performed and can often be facilitated with a bleeding diary to help quantify symptoms. The typical candidate for endometrial ablation has heavy menses, which can be defined as blood loss exceeding 80 mL per menses or a menstrual flow longer than 7 days. Once a bleeding pattern is established, special note should be made of the absence or presence of premenstrual syndrome (PMS) and dysmenorrhea (painful men-

ses), both of which often present as comorbidities with menorrhagia. This presence of dysmenorrhea in particular could suggest an underlying diagnosis of adenomyosis, a condition which may respond inadequately to endometrial ablation alone and eventually require a hysterectomy. Although PMS and dysmenorrhea can represent potential indicators of incomplete symptom response with endometrial ablation, several studies have also shown reductions in these conditions with endometrial ablation. Therefore endometrial ablation may be a viable option for patients with these additional complaints.

Suboptimal and controversial patients are those who are anovulatory or obese, given concerns over endometrial hyperplasia and carcinoma. Other relevant issues to address are possible systemic or iatrogenic etiologies for abnormal uterine bleeding in addition to excluding pregnancy, pelvic infection, and cervical or vulvar neoplasia.

In addition to a thorough physical examination, it is recommended that all potential candidates have a Papanicolaou test and an endometrial biopsy to document the absence of an endometrial neoplasm. Preoperative imaging studies such as hysteroscopy or saline infusion sonography, and uterine cavity length should be appropriately incorporated into the evaluation. These can often

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reveal submucosal fibroids or endometrial polyps in addition to a uterine anomaly or potential myometrial wall defect from a previous cesarean delivery or myomectomy. Laboratory studies should include a complete blood count and pregnancy test as well as screening for bleeding disorders when indicated.

It is important to confirm that patients seeking endometrial ablation have completed childbearing or do not desire future fertility and have a reliable contraceptive method in place since endometrial ablation only reduces fertility and does not eliminate it. Patients should also be informed that endometrial pretreatment with gonadotropin-releasing hormone-agonist hormonal suppression

or a dilation and curettage procedure may be incorporated into some of the ablation technologies.

NONABLATIVE SURGICAL AND NONSURGICAL OPTIONS

The physical examination in conjunction with preoperative imaging can reveal the presence of fibroids or endometrial polyps. Fibroids in particular are often implicated in cases of abnormal uterine bleeding, particularly when submucosal in location. The primary surgical management of symptomatic fibroids for women desiring future fertility or uterine conservation is through a myomectomy. Today many cases of intramural and subserous fibroids are managed with laparoscopic myomectomy while select submucosal cases are managed with hysteroscopic myomectomy. Likewise endometrial polyps can be managed via hysteroscopy. When submucosal fibroids approach a size deemed unsafe and too large to address by hysteroscopy, a transabdominal route, whether

by laparotomy or laparoscopy, is necessary for extraction. Although some of the second-generation endometrial ablation devices require a normal cavity, there are several such as Her Option and Hydro ThermAblator which are able to treat cavities distorted by fibroids.

Hysterectomy remains the treatment of choice for patients with refractory abnormal uterine bleeding despite conservative medical and/or surgical attempts at management and who also no longer desire fertility or uterine preservation. Traditionally this is approached with either an abdominal or vaginal route; however, with the evolution of surgical technology the approaches by which a hysterectomy is performed have also evolved. This is seen in the transformation of hysterectomy to the laparoscopic-assisted vaginal hysterectomy and eventually the laparoscopic supracervical and total laparoscopic hysterectomy. Although endometrial ablation can provide excellent clinical results and high rates of patient satisfaction, there are still patients for whom hysterectomy will be the logical choice based on their clinical circumstances. For patients seeking complete cessation of menses, hysterectomy may be the more appropriate option since endometrial ablation is designed to offer a reduction in menstrual flow and is not a guarantee of amenorrhea, although this too can be an outcome.

Other less invasive management strategies for abnormal uterine bleeding include uterine artery embolization (UAE) and the hormonal intrauterine device (IUD). Although UAE can reduce excessive bleeding in patients suffering from symptomatic fibroids, it does require magnetic resonance imaging of the pelvis and is performed by an interventional radiologist. The hormonal IUD, while not FDA-approved for the treatment of menorrhagia, has also shown positive effects on symptom reduction and may be another nonsurgical alternative.

CONCLUSION

Overall, endometrial ablation provides an excellent option for women seeking a less invasive surgical alternative for the treatment of menorrhagia. Costs, ease of use, and patient acceptance are key factors which will help determine the most appropriate treatment options, surgical and nonsurgical, available to patients. Synchronizing patient expectations with the goals of a particular intervention are also important in selecting the appropriate treatment strategy. With these factors in mind, high satisfaction ratings and clinical outcomes can be obtained with endometrial ablation. In fact, a significant advantage of endometrial ablation over other treatment strategies is the applicability of all five second-generation devices to the office with the use of local anesthesia and conscious sedation. Critical to the success of an office-based endometrial ablation is an appropriate infrastructure with both physicians and office personnel trained in conscious sedation and airway management with advanced cardiac

support certification. Additionally, use of this new generation of devices does not necessarily require endometrial pretreatment despite being a prerequisite for the pivotal FDA trials. Therefore side effects from hormonal treatments can be avoided in patients. Finally, modern day global endometrial ablation has a proven track record of safety as confirmed by the rare complications seen in the FDA Manufacturer and User Facility Device Experience database. When present these complications were a reflection of endometrial ablations performed in patients for whom contraindications existed and product specifications were not well understood. This further highlights the importance of a detailed medical history and physical examination as well as a thorough understanding of all available treatment options for menorrhagia including indications and contraindications. Possessing a comprehensive and functional counseling approach to management strategies for menorrhagia can result in high success rates for both patient and physician.