When Should Endometrial Polyps Be Treated?

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Abstract Endometrial polyps are localized intrauterine overgrowths of endometrial glands and stroma covered by a surface epithelium. They occur singularly or in multiples, may be sessile or pedunculated, and range from a few millimeters to several centimeters in size. They are common, present in 7.8%–41% of women. Their detection has increased with the advent of high-resolution transvaginal sonography, saline-infusion ultrasonography, and hysteroscopy. Polyps are encountered in both premenopausal and postmenopausal women. Many women are asymptomatic, while others present with abnormal bleeding patterns. Most polyps are benign, but hyperplastic and malignant polyps also may occur. Appropriate management of endometrial polyps includes observation, medication, and surgery. Treatment of these lesions should be tailored to each patient based on their symptoms, menopausal status, risk of malignancy, and fertility desires.

Keywords Endometrial polyps · Polypectomy · Polyp management · Polyp malignancy · Abnormal uterine bleeding · Hysteroscopy · Saline sonohysterography · Ultrasound

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Introduction

As our ability to image the female pelvis has advanced, endometrial polyps, localized intrauterine overgrowths of endometrial glands and stroma covered by a surface epithelium [1], are diagnosed more frequently. Transvaginal sonography (TVUS), saline-infusion ultrasonography (SIS), and hysteroscopy are employed in the investigation of abnormal bleeding patterns, during infertility evaluations, and for other gynecologic indications. Polyps may be diagnosed incidentally in asymptomatic women or during the examination of symptomatic patients. When a polyp is identified, clinicians and patients commonly ask, “Is removal necessary?”

This review summarizes the current literature on the epidemiology, diagnosis, clinical course, and treatment of endometrial polyps.

Epidemiology and Clinical Presentation

Endometrial polyps are common, affecting 7.8%–41% of women [2–7], occurring in premenopausal and postmenopausal women. Some patients are asymptomatic at the time of diagnosis while others present with abnormal bleeding patterns such as intermenstrual bleeding, heavy menstrual bleeding, spotting, discharge, postcoital bleeding, or postmenopausal bleeding [8–10].

Although it is reported that the prevalence of polyps is higher in postmenopausal than in premenopausal women, this higher incidence may reflect a selection bias, given that postmenopausal women are more likely to be evaluated for abnormal vaginal bleeding [3].

Endometrial polyps are often diagnosed in premenopausal women who undergo evaluation for infertility. It is hypothesized that polyps may affect sperm migration and embryo implantation [11].

The histogenesis of polyps is uncertain. One theory is that polyps represent unresponsive areas of endometrium that remain in situ, along with the basalis, during menstrual shedding [12]. Polyps are considered to be estrogen-sensitive; their proliferative response to estrogen is similar to that of the surrounding endometrium. Molecular mechanisms also have been proposed to play a role in their genesis, including monoclonal endometrial hyperplasia [13], overexpression of endometrial aromatase [14, 15], and gene mutations [16, 17].

Diagnosis

Imaging

TVUS, SIS, and hysteroscopy facilitate diagnosis of endometrial polyps. In developed countries, TVUS is commonly employed as a first-line diagnostic procedure to assess the endometrium. The advantages of TVUS include that instrumentation is readily available, safe, and noninvasive. The disadvantage is that TVUS is not specific in identifying polyps (Fig. 1). In other words, a polyp may appear as endometrial thickening or as a focal mass in the endometrial cavity [1]. Other endometrial pathologies, such as submucosal fibroids, may have a similar sonographic appearance. To better assess the endometrial cavity, it is recommended (if feasible) to perform TVUS early in the proliferative phase (before cycle day 10 in a cycling woman) to ensure a thin endometrium surrounding the intracavitary lesion [18].

SIS has a higher sensitivity and specificity than TVUS at identifying endometrial polyps [19–21] and is more precise in determining polyp size and locations (Fig. 2). Although it can be difficult to distinguish submucosal fibroids from polyps with SIS, our experience is that while fibroids tend to be broad-based (projecting from the myometrium) and appear similar (isoechoic) to the myometrium in echotexture, polyps are characteristically exophytic (projecting from

Fig. 1 TVUS demonstrating a non-specific endometrial thickening

Fig. 2 SIS demonstrating a hyperechoic intracavitary mass suggestive of an endometrial polyp

the endometrium, not the myometrium) and are more hyperechoic. Although SIS represents an essentially noninvasive office procedure that does not require analgesia or anesthesia, women often experience transient menstrual-like cramping and fluid leakage during and after the procedure. As with TVUS, SIS does not allow for a histologic diagnosis.

Histologic Diagnosis

Endometrial sampling using disposable suction catheters and hysteroscopic-guided endometrial biopsies can be employed to diagnose and obtain a histologic diagnosis of endometrial polyps. Advantages of sampling the endometrium with a disposable suction catheter include that this procedure can be readily performed in the office with minimal instrumentation. A disadvantage of using a disposable suction catheter for endometrial evaluation is that this is a blind procedure that may be unsuccessful in sampling a polyp (or may cause fragmentation of a polyp), either resulting in failure to diagnose a polyp or making histologic diagnosis difficult [22].

Hysteroscopy with guided biopsy represents the gold standard in the diagnosis of endometrial polyps [23–25]. This modality has higher accuracy than any other diagnostic test at identifying endometrial polyps because of the ability to visualize the endometrial pathology [26–28]. Another advantage is the ability to resect polyp or other intracavitary pathology at the time of diagnosis.

Although traditionally hysteroscopy has mostly been performed in an operating room using a major anesthetic, hysteroscopy is increasingly being performed in the office [29]. Although hysteroscopy can be considered a safe procedure [30], uterine perforation, cervical trauma, and bleeding represent well-documented complications [31–33]. Some experts utilize hysteroscopy largely as a therapeutic modality, using SIS to establish a diagnosis and define anatomy before proceeding with surgery.

Clinical Course

The natural course of endometrial polyps has not been fully elucidated. There is a high rate of regression in polyps smaller than 1 cm [7] and in asymptomatic premenopausal women [7, 34].

Most polyps that persist are benign, but a small proportion of polyps are malignant. A woman's risk of having a malignant polyp can be estimated based on her menopausal status and symptomatology. Both symptomatic vaginal bleeding and postmenopausal status in women with endometrial polyps are associated with an increased risk of endometrial malignancy. In a recently published meta-analysis exploring the risk of malignancy within endometrial polyps, the overall prevalence of a malignant polyp was 3.23%. Among polyps detected, the prevalence of endometrial neoplasia (atypical hyperplasia or adenocarcinoma) was higher in postmenopausal women (4.91%) than in reproductive-age women (1.30%). The prevalence of endometrial neoplasia within polyps in women with symptomatic bleeding was 4.09% in comparison to 2.13% in women without bleeding. Among symptomatic postmenopausal women with endometrial polyps, 4.47% had a neoplastic polyp in comparison to 1.51% of asymptomatic postmenopausal women [35•].

In women seeking fertility treatment, polyps may interfere with pregnancy. Because polypectomy can improve fertility in subfertile women with asymptomatic endometrial polyps, some experts remove endometrial polyps in infertile women, even in the absence of abnormal bleeding [36].

Treatment

The management of endometrial polyps depends on a woman's symptoms, risk of malignancy, fertility desires, personal preferences, and available treatment resources. Treatment options include expectant management, dilation and curettage, and hysteroscopy with polypectomy.

Expectant management can be considered in women with small (< 1 cm) asymptomatic polyps because they may regress spontaneously [7, 32]. Reproductive-age women and women who are asymptomatic also have a low risk of endometrial malignancy (less than 2%) and may also contemplate expectant management. When following women known to have asymptomatic polyps, clinicians should encourage such women to report any abnormal bleeding or spotting; the occurrence of such symptoms should prompt reevaluation and polyp resection.

Polypectomy is recommended in symptomatic women to correct their abnormal bleeding patterns and to detect possible endometrial malignancy. Similarly, removal of polyps is recommended in postmenopausal women because they

are at increased risk for endometrial neoplasia. As mentioned, women who are undergoing fertility treatment should also consider polyp removal because it may improve their chances of achieving pregnancy.

Although blind curettage may be utilized to attempt to resect polyps, operative hysteroscopy with polypectomy is preferable because blind curettage may not result in a complete removal of polyps and is associated with an increased risk of such complications as uterine perforation and infection [24, 37, 38]. Hysteroscopic-guided polyp resection yields direct visualization of polyps, allowing for complete removal of the specimen. Devices such as grasping forceps, suction curettes, microscissors, electrosurgical loops, morcellators, or bipolar electric probes may be used under direct visualization to ensure that the entire polyp is removed while minimizing risk of uterine perforation [39–41].

Conclusions

Endometrial polyps represent a common gynecologic pathology. They may be diagnosed in symptomatic women who have abnormal bleeding patterns, in asymptomatic women, and during evaluation for infertility. Polyps are diagnosed in premenopausal or postmenopausal women. Increasing use of TVUS has resulted in polyps being suspected in far more women than before this technology was widely utilized. SIS is appropriate for confirming the diagnosis of endometrial polyps.

Most endometrial polyps are benign, but a small proportion of polyps are malignant. The presence of abnormal bleeding and postmenopausal status represents the most important risk factors for malignancy. Small polyps (< 1 cm) may be managed expectantly because they may spontaneously regress. Polyp removal should be considered in symptomatic women, postmenopausal women, or women with infertility. The safest and most efficacious procedure to remove endometrial polyps is hysteroscopic polypectomy.

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