Gaziantep Tıp Derg 2013;19(3): 149-151
Gaziantep Med J 2013;19(3): 149-151

Gaziantep Tıp Dergisi
Gaziantep Medical Journal

Araştırma Makalesi
Research Article

Premalignant and malignant changes in endometrial polyps

Endometrial poliplerde premalign ve malign değişiklikler

Hüseyin Cengiz[1], Cihan Kaya[1], Şükrü Yıldız[1], Murat Ekin[1], Hediye Dağdeviren[1], Keziban Doğan[1]

[1]Dr. Sadi Konuk Research and Training Hospital, Obstetrics and Gynecology Clinic, İstanbul

Abstract

The objective of this study was to evaluate the risk of premalignant and malignant changes in endometrial polyps that were removed entirely by operative hysteroscopy. The study group was comprised of 101 cases of endometrial polyps diagnosed by diagnostic hysteroscopy, transvaginal ultrasonography and saline contrast sonohysterography in our Obstetrics and Gynecology Clinic from January 2010 to July 2012. A retrospective chart review was then performed with the use of medical records. The operative procedure was performed under general anesthesia. The specimens were placed in 10% formaldehyde for histological examination. Clinical characteristics such as age, parity, menopausal status, hypertension (defined as diastolic pressure ≥90 mm Hg and/or systolic pressure ≥140 mm Hg), abnormal uterine bleeding, diabetes (fasting glucose ≥110 mg/dl) were also reported from the medical records. Statistical Analysis was performed by using the SPSS 11.5 statistical software package (SPSS, Chicago, IL, USA). The mean age of the study group was 45 (25-73) years-old. The most common indication for performing operative hysteroscopy was abnormal uterine bleeding 82.2% (n=83). It is worthwhile to note that 3 patients (2.9%) had premalignant and malignant changes of polyps. One patient who was 58 years old had invasive endometrial cancer. None of the clinical variables considered (diabetes mellitus, hypertension, hormone replacement therapy) were statistically related to the histopathological results. Although the prevalence of premalignant and malignant endometrial polyps is very low, the early diagnosis of malignancy is very important. The most common indication was abnormal uterin bleeding for performing operative hysterescopy.

Keywords: Endometrial carcinoma; endometrial polyp; hysteroscopy

Özet

Bu çalışmada operatif histeroskopi ile çıkarılan endometrial poliplerde, premalign ve malign değişikliklerin prevelansını ve riskini değerlendirmek amaçlandı. Çalışma grubuna, Ocak 2010-Temmuz 2012 arasında Kadın Hastalıkları ve Doğum Kliniği'ne diagnostik histeroskopi, transvajinal ultrasonografi ve salin infüzyon sonohisterografi ile tanı konulan 101 endometrial polip olgusu dahil edildi. Medikal kayıtlar retrospektif olarak incelendi. Operatif işlemler genel anestezi altında yapıldı. Operasyon spesimenleri histolojik inceleme için %10'luk formaldehid içerisine konuldu. Medikal kayıtlardan; yaş, parite, menopozal durum, hipertansiyon (diastolik basınç ≥90 mmHg ve/veya sistolik basınç ≥140 mmHg olarak tanımlanmıştır), anormal uterin kanama, diabet (açlık şekeri ≥110 mg/dl) gibi klinik karekteristik özellikler incelendi. İstatistiksel analiz SPSS 11.5 istatistik paket programı (SPSS, Chicago, IL, ABD) kullanılarak yapıldı. Çalışma grubunun ortalama yaşı 45 (25-73) idi. Operatif histeroskopi için en sık endikasyon anormal uterin kanama olarak saptandı %82.2 (n=83). Üç hastada (%2.9) poliplerde premalign ve malign değişiklikler tespit edildi. Elli sekiz yaşındaki bir hastada invaziv endometrial kanser tespit edildi. Klinik özelliklerin (diabetes mellitus, hipertansiyon, hormon replasman tedavisi) hiçbiri histopatolojik sonuçlarla istatistiksel olarak ilişkili bulunmadı. Endometrial poliplerde premalign ve malign değişikliklerin prevelansı düşük olmasına rağmen malignite ihtimali her zaman göz önünde bulundurulmalıdır. Operatif histereskopi uygulamasının en sık endikasyonu anormal uterin kanamadır.

Anahtar kelimeler: Endometrial karsinoma; endometrial polip; histeroskopi

Introduction

The endometrial polyp is a pedunculated or sessile excretion of the endometrium containing variable amounts of glands, stroma and blood vessels. Endometrial polyps are common pathological lesions of the uterine corpus and are usually found in perimenopausal women (1-6). The prevalence of endometrial polyps in the general symptomatic female population is estimated to range from approximately 13% to 50% (7,8). Abnormal uterine bleeding is frequently the presenting symptom of the endometrial polyps. However, polyps are often asymptomatic and are incidentally found during routine transvaginal ultrasound or infertility investigations (1-6,8). Although polyps are in general benign growths (1), malignancy confined to a polyp has also been identified (10). The incidence of carcinoma confined to endometrial polyps (malignant polyps) varies between 0% and 4.8%, depending on the selection of patients and the methods used in making the diagnosis (9-11). The clinician has to face the issue of how to treat endometrial polyps because they are being diagnosed in growing numbers even in asymptomatic women and because their malignant potential has not been understood completely yet (11).

The objective of this study was to evaluate the prevalence and risk of premalignant and malignant changes in endometrial polyps that were removed entirely by operative hysteroscopy.

Material and methods

The study group was comprised of 101 cases of endometrial polyps diagnosed by diagnostic hysteroscopy, transvaginal ultrasonography and saline contrast sonohysterography in our Obstetrics and Gynecology Clinic from January 2010 to July 2012. After local ethics committee approval was obtained, a retrospective chart review was performed with the use of medical records. The study group included both pre and postmenopausal women. Postmenopausal women are

İletişim/Correspondence to: Şükrü Yıldız, Dr. Sadi Konuk Research and Training Hospital, Obstetrics and Gynecology Clinic, İstanbul, TURKEY
Tel: +90 212 4147372 *dr.sukruyildiz@hotmail.com*

Received: 18.12.2012 **Accepted:** 19.06.2013
Geliş Tarihi: 18.12.2012 **Kabul Tarihi:** 19.06.2013

DOI: 10.5455/GMJ-30-2013-140
http://gul6.bim.gantep.edu.tr/~tipdergi
ISSN 1300-0888

defined with a reported period of at least 12 months of amenorrhea after the age of 45 years. Abnormal uterine bleeding was defined as any vaginal bleeding in postmenopausal women not receiving hormone replacement therapy (HRT) or as irregular vaginal bleeding in women still actively menstruating or being treated with HRT.

Diagnostic hysteroscopy was performed in women with abnormal uterine bleeding, or in asymptomatic women in whom abnormal endometrial finding was suspected on routine pelvic sonography performed as a complementary mode during the annual gynecological examination. All women included in the study underwent endometrial evaluation at the gynecologic ultrasound unit. Scans were performed by using a real-time ultrasound scanners GE LOGIQ 200 units with a 5.0-MHz transvaginal probe. Diagnostic hysteroscopy was performed, using saline infusion as a distention medium, and a Storz Endoscope (Tuttlingen, Germany), with a 5 mm diagnostic sheath.

Operative hysteroscopy was performed with continuous flow, high frequency resectoscope. Under general anesthesia the cervix was dilated to 10 mm and the uterine cavity was distended with 1.5% glycine solution or mannitol under 80 to 120 mmHg pressure. Resection with electrocoagulation was completed. The specimens were placed in 10% formaldehyde for histological examination. Diagnosis distinguished between polyps that were recognized as benign, hyperplasic (simple or complex hyperplasia), pre-malignant (simple or complex hyperplasia with atypia), and those harboring carcinoma. Clinical characteristics such as age, parity, menopausal status, hypertension (defined as diastolic pressure ≥90 mmHg and/or systolic pressure ≥140 mmHg), abnormal uterine bleeding, diabetes (fasting glucose ≥110 mg/dl) were also reported in the medical record. Statistical Analysis was performed by using the SPSS 11.5 statistical software package (SPSS, Chicago, IL, ABD).

Results

The mean age of the study group was 45 (25-73) years-old. The characteristics of the study population were described in Table 1. The most common indication was abnormal uterine bleeding 82.2% (n=83) for performing operative hysteroscopy. The histological results of 101 patients with endometrial polyps were shown in Table 2. It is worthwhile to note that 3 patients (2.9%) had premalignant and malignant changes of polyps. One patient had invasive endometrial cancer who was 58 years-old. None of the clinical variables considered (diabetes mellitus, hypertension, HRT) were statistically related to the histopathological results.

Discussion

Endometrial polyps are usually localized excrescences of the endometrial lining. They represent the most common causes of menometrorrhagia resistant to medical therapy in premenopausal women or can cause abnormal bleeding in post-menopausal patients. Scott believed endometrial polyps to be an enigmatic entity whose frequency, potential to cause bleeding and malignant capacity were unknown (12). About six decades later, this entity remains poorly understood. Previous studies reported the malignancy rate in endometrial polyps to vary between 0 and 4.8% (5,9-11,13,14). We have found a similar rate (2.9%) of malignant and pre-malignant conditions confined to the polyps. In our study only one patient had invasive endometrial adenocarsinoma. The reasons for the discrepancies in the rate of hyperplasia and carcinoma in endometrial polyps may lie in biases originating in the small size of some published series and in the different diagnostic tools used. Currently, isolated endometrial polyps are diagnosed by hysteroscopy. In older studies, where uterine curettage rather than hysteroscopy was used, it was difficult to assess whether uterine pathologies were associated with an endometrial polyp, or were truly confined to a polyp. Another possible reason for the varying malignant rate found in endometrial polyps may be associated with different rates of high-risk patients for endometrial malignancy in the cohort studied. Age, race, menopausal status and HRT or tamoxifen treatments are known risk factors for endometrial cancer (15).

Table 1. Patient characteristics.

Clinical parameters	No. of patients (%)
Nulliparity	28 (27.7)
Pre-menopause	80 (79.2)
Menopause	21 (20.8)
Hormone replacement therapy	3 (0.6)
Asymptomatic	18 (17.8)
Abnormal uterine bleeding	83 (82.2)
Hypertension	7 (6.9)
Diabetes mellitus	1 (0.9)

Table 2. Histopathological results of endometrial polyps.

Histology	No. of patients (%)
Benign polyps	95 (94.0)
Hyperplasia without atypia	3 (2.9)
Hyperplasia with atypia	2 (1.9)
Invasive endometrial cancer	1 (0.9)
Total	101 (100)

High rates of endometrial polyps are asymptomatic and are found incidentally on routine vaginal sonography (2,16,17). Goldstein et al. (5) found that 19 of 61 polyps (31.1%) were incidentally diagnosed. In the current series, 17 (16.8%) of the resected polyps were asymptomatic. According to the series by Giordano et al. (18) and the paper by Savelli et al. (11) hypertension is confirmed as risk factor related to malignant changes of endometrial polyps. However, we could not find a significant relationship between hypertension and malignancy of endometrial polyps.

The most important limitation of the present study is, the total number of endometrial polyps that we observed was small and like any retrospective study, faced the challenges of medical record abstraction, with some data simply not found.

In conclusion, although the prevalence of premalignant and malignant endometrial polyps is very low, early diagnosis of malignancy is very important. Therefore, understanding the importance of endometrial polyps and their proposed management is crucial. We suggest that the malignancy potential of endometrial polyps should be considered both symptomatic and asymptomatic patients.

References

1. Schlaen I, Bergeron C, Ferenczy A, Wong P, Naves A. Endometrial polyps: a study of 204 cases. Surg Pathol 1988;1(3):375-82.
2. DeWaay DJ, Syrop CH, Nygaard IE, Davis WA, Van Voorhis BJ. Natural history of uterine polyps and leiomyomata. Obstet Gynecol 2002;100(1):3-7.
3. De Vries L, Dijkhuizen F, Mol B, Brölmann H, Moret E, Heintz A. Comparison of transvaginal sonography, saline infusion sonography, and hysteroscopy in premenopausal women with abnormal uterine bleeding. J Clin Ultrasound 2000;28(5):217-23.
4. Widrich T, Bradley L, Mitchinson A, Collins R. Comparison of saline infused sonography with office hysteroscopy for the evaluation of the endometrium. Am J Obstet Gynecol 1996;174(4):1327-34.
5. Goldstein SR, Monteagudo A, Popiolek D, Mayberry P, Timor-Tritsch I. Evaluation of endometrial polyps. Am J Obstet Gynecol 2002;186(4):669-74.
6. Sherman ME, Mazur MT, Kurman RJ. Benign diseases of the endometrium. In: Kurman RJ, editor. Blaunstein's pathology of the female genital tract. 3rd ed. New York, Springer, 2002;421-66.
7. Widrich T, Bradley L, Mitchinson A, Collins R. Comparison of saline infused sonography with office hysteroscopy for the evaluation of the endometrium. Am J Obstet Gynecol 1996;174(4):1327-34.
8. Caspi B, Appelman Z, Goldchmit R, Ashkenazi M, Haruvy Y, Hagay Z. The bright edge of the endometrial polyp. Ultrasound Obstet Gynecol 2000;15(4):327-30.
9. Anastasiadis PG, Koutlaki NG, Skaphida PG, Galazios GC, Tsikouras PN, Liberis VA. Endometrial polyps: prevalence, detection, and malignant potential in women with abnormal uterine bleeding. Eur J Gynaecol Oncol 2000;21(2):180-3.
10. Bakour SH, Khan KS, Gupta JK. The risk of premalignant and malignant pathology in endometrial polyps. Acta Obstet Gynecol Scand 2000;79(4):317-20.
11. Savelli L, De Iaco P, Santini D, Rosati F, Ghi T, Pignotti E, et al. Histopathologic features and risk factors for benignity, hyperplasia, and cancer in endometrial polyps. Am J Obstet Gynecol 2003;188(4):927-31.
12. Scott RB. The elusive endometrial polyp. Obstet Gynecol 1953;1(2):212-8.
13. Wolfe A, Mackles A. Malignant lesions arising from benign endometrial polyps. Obstet Gynecol 1962;20(3):542-50.
14. Orvieto R, Bar-Hava I, Dicker D, Bar J, Ben-Rafael Z, Neri A. Endometrial polyps during menopause: characterization and significance. Acta Obstet Gynecol Scand 1999;78(10):883-6.
15. Ben-Arie A, Goldchmit C, Laviv Y, Levy R, Caspi B, Huszar M, et al. The malignant potential of endometrial polyps. Eur J Obstet Gynecol Reprod Biol 2004;115(2):206-10.
16. Clevenger-Hoeft M, Syrop CH, Stovall DW, Van Voorhis BJ. Sonohysterography in premenopausal women with and without abnormal bleeding. Obstet Gynecol 1999;94(4):516-20.
17. Tjarks M, Van Voorhis B. Treatment of endometrial polyps. Obstet Gynecol 2000;96(6):886-9.
18. Giordano G, Gnetti L, Merisio C, Melpignano M. Postmenopausal status, hypertension and obesity as risk factors for malignant transformation in endometrial polyps. Maturitas 2007;56(2):190-7.