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Endometrial Polyp, When Should we be Alarmed?

Neda Zarrin-Khameh*

Department of Pathology & Immunology, Baylor College of Medicine, One Baylor Plaza and Ben Taub Hospital, Houston Texas, USA

***Corresponding author:** Neda Zarrin-Khameh, Department of Pathology & Immunology, Baylor College of Medicine, One Baylor Plaza and Ben Taub Hospital, Houston Texas, USA, Tel: 713-873-4460, Fax: 713-873-3214, Email: nzarrrink@bcm.edu

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Abstract

Eight-year search of our database disclosed ten patients with a malignancy arising from an endometrial polyp. The patients were between 51 to 79-years-old and presented primarily with post-menopausal bleeding. Seven patients had serous carcinoma, two were diagnosed with endometrioid endometrial adenocarcinoma and one had clear cell carcinoma. All of the patients were either obese, or had a history of obesity. The only patient with BMI of 19, had BMI of 32 three years prior to her presentation. Endometrial polyps in postmenopausal women should be followed closely, especially in obese women.

Keywords: Endometrial Polyp, Postmenopause, Malignancy Obesity, BMI

Introduction

Prevalence of endometrial polyp in the general population is about 24%. Endometrial polyps are more common in postmenopausal women [1-5]. Measurement of endometrial thickness by transvaginal ultrasound is an accepted initial diagnostic modality to distinguish between benign and pathological endometrial changes both before and after menopause. Endometrial cells may be seen in a Pap test, although Pap is not a screening test for endometrial cancer. CA-125 may be used in patients with abnormal endometrial bleeding to detect endometrial carcinoma [6].

Literature suggests up to 8% risk of malignant transformation of an endometrial polyp, with the risk higher in postmenopausal women, especially if they present with bleeding and have large polyps [6-12]. Other risk factors for malignant transformation of endometrial polyps are hypertension and obesity [13].

A most recent updated practice guideline for the management of endometrial polyp recommended mandatory histopathological evaluation of the polyp due to the risk of malignancy. In case of atypical hyperplasia or carcinoma of a polyp, hysterectomy is recommended in all post-menopausal patients and in premenopausal patients who do not plan to become pregnant.

Asymptomatic endometrial polyps in postmenopausal women are recommended to be removed in case of large diameter (>2cm) or in patients with risk factors for endometrial carcinoma. Removal of asymptomatic polyps in premenopausal women should be considered in patients with risk factors for endometrial cancer [14].

Although polyps with endometrioid endometrial carcinoma may be completely removed during hysteroscopy, prediction of residual disease is not possible [15].

Material and Method

We received IRB approval for our study. We searched our data base from January 1, 2007 to December 31, 2018 and found 598 cases with endometrial polyps. Ten of these polyps (0.017%) had an associated malignancy. We evaluated the demographic information from the patients and reviewed the pathology glass slides.

Results

The patients with polyps were between 22 and 88-years-old (mean age of 55-years-old), while the patients with malignancy were between 51 to 79-years-old (mean age of 64-years-old). All of the patients, but one were obese (Chart 1). The only patient with BMI of 19 had BMI of 32 three years prior to her presentation. The patients presented primarily with post-menopausal bleeding. One patient did not have a Pap test. Pap tests in four patients were reported as negative for intraepithelial lesion or malignancy (NILM), one had atrophy and the rest had either atypical glandular cells (AGUS) or atypical endometrial cells. One of the patients received Tamoxifen for her breast carcinoma 10 years prior to her current presentation. CA125 was available only in 3 patients and was mildly elevated in one patient. Elevated CA125 may be followed for evaluation of recurrence. Seven patients had serous carcinoma, two were diagnosed with endoemtrioid endometrial adenocarcinoma and one had clear cell carcinoma (Figures 1-2). Size of polyps were between 1 to 3 cm in diameter. Malignancy was confined to polyps in only two patients. Two patients decided to receive treatment in other hospitals, while the other eight underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy with or without staging. One of the cases with diagnosis of serous carcinoma in biopsy had carcinosarcoma (MMMT) in the hysterectomy specimen (table). The patients with endometrioid carcinoma have the best prognosis.

Patient	BMI	History of endocrine therapy for breast carcinoma	CA125*	Pap test	Polyp size (cm)	Confined to polyp	Malignancy	Peritoneal washing	Follow up
A	44.6	No	N/A	NILM	1.2cm	No, background of complex hyperplasia	Endometrioid endometrial carcinoma	Negative	Free of disease 2yr
B	19**	No	39.4 U/ml	AGUS favor neoplastic	2.5 cm	No	Papillary serous carcinoma	Negative	Partial small bowel obstruction after 2 years and hospice
C	36.9	No	9U/ml	Atrophy	2.5	Not known	Serous carcinoma and complex hyperplasia	NP	Free of disease 3yr
D	40.4	Yes	N/A	Atypical EC(7mon prior)	2	Two previous polypectomies	Serous intraepithelial carcinoma in polyp	NP	Disease free for 2 years
E	31.4	No	N/A	NILM	1.8	Not known	Serous carcinoma	NP	Disease free for 3 years
F	39.7	No	N/A	NILM (2yr)	2.3	No	Serous, but turned out to be MMMT	Negative	Disease free for 3 years
G	30.6	No	5.8 U/ml	No Pap	3.5	Not known	Clear cell carcinoma	NP	13 months later liver metastasis

H	44	No	N/A	AGUS NOS	3	Yes, background complex hyperplasia	High-grade carcinoma (serous)	Negative	Disease free for 1 year
I	41.8	No	N/A	NILM (15 mon prior)	1.5	No	Serous carcinoma	Negative	Disease free for 1 year
J	37.4	No	N/A	AGUS /EC	3 polyps from 1-2 cm, all involved	Yes	Serous carcinoma	NP	Disease free for 1 year

* The reference range for CA-125 is (0 – 32 U/ml)

**The patient with BMI of 19 had BMI of 32 three years prior to her presentation (We did not use BMI of one patient who lost weight, so the mean is calculated only in obese patients.

Chart

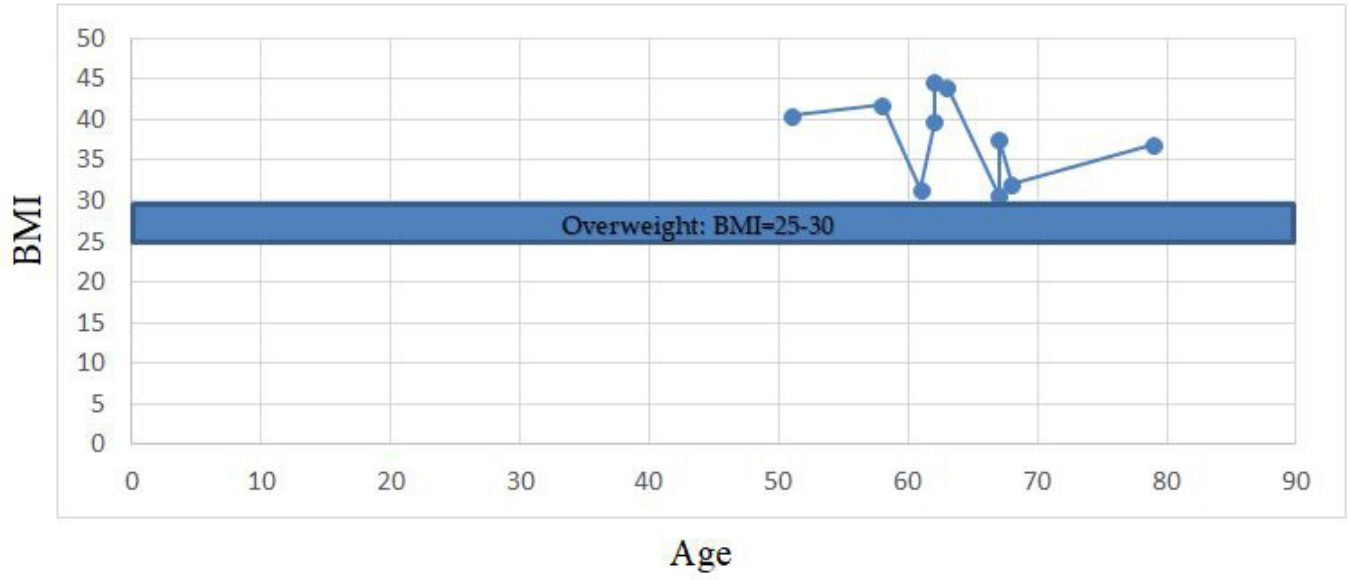

Chart: This chart shows body mass index (BMI) and age of the patients. Patients are 50-80 years of age. Their BMI are all in the range of obesity

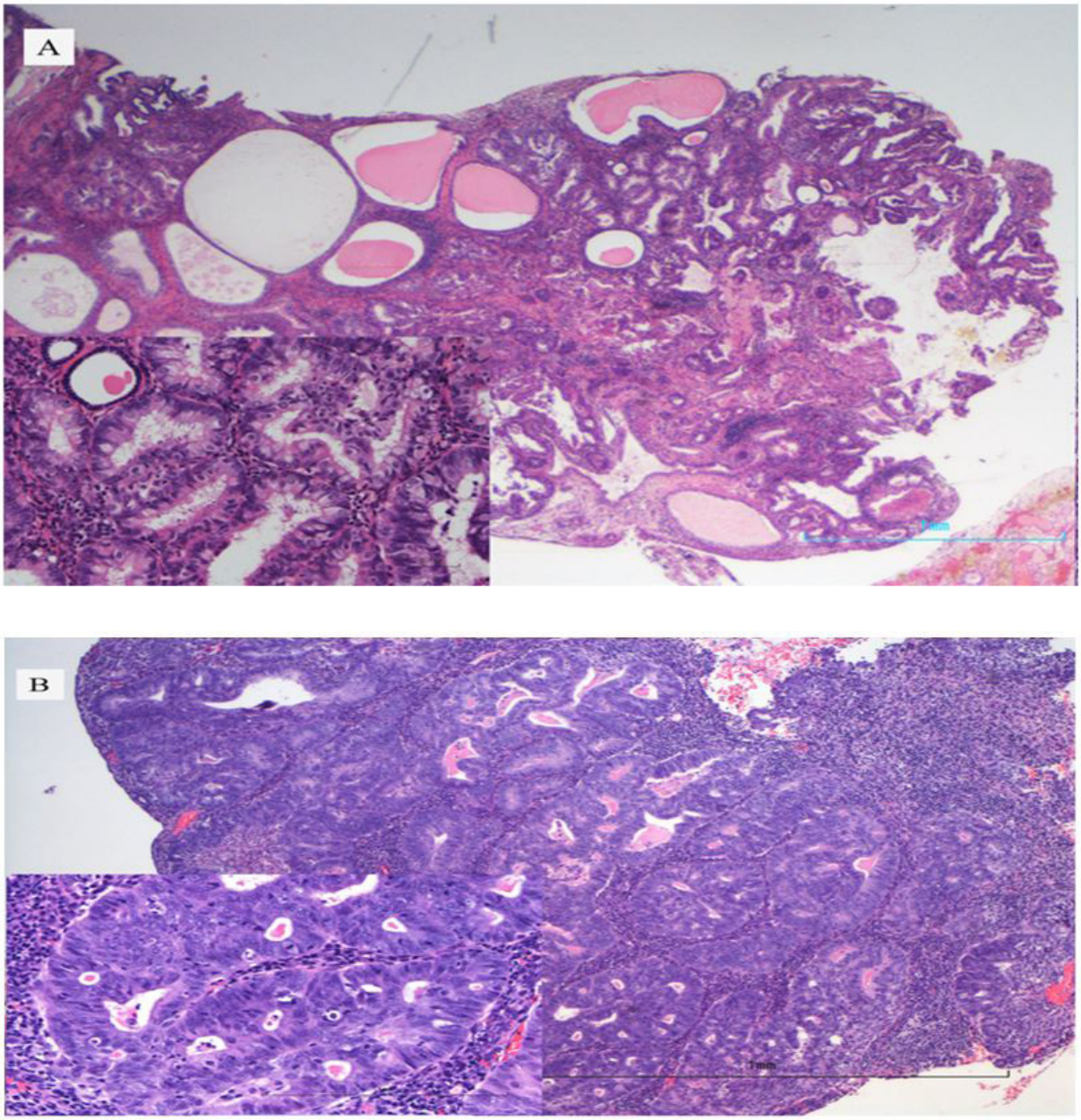

Figure 1: A: 62-year-old postmenopausal woman with history of endometrial hyperplasia presented with vaginal bleeding. Endometrial curettage showed endometrioid carcinoma in a background of complex hyperplasia with atypia. B. a 51-year-old postmenopausal woman presented with vaginal bleeding and Pap test showed atypical endometrial cells and ASCUS. Endometrial polypectomy showed a benign polyp. Repeat polypectomy after 5 months showed an endometriod endometrial adenocarcinoma

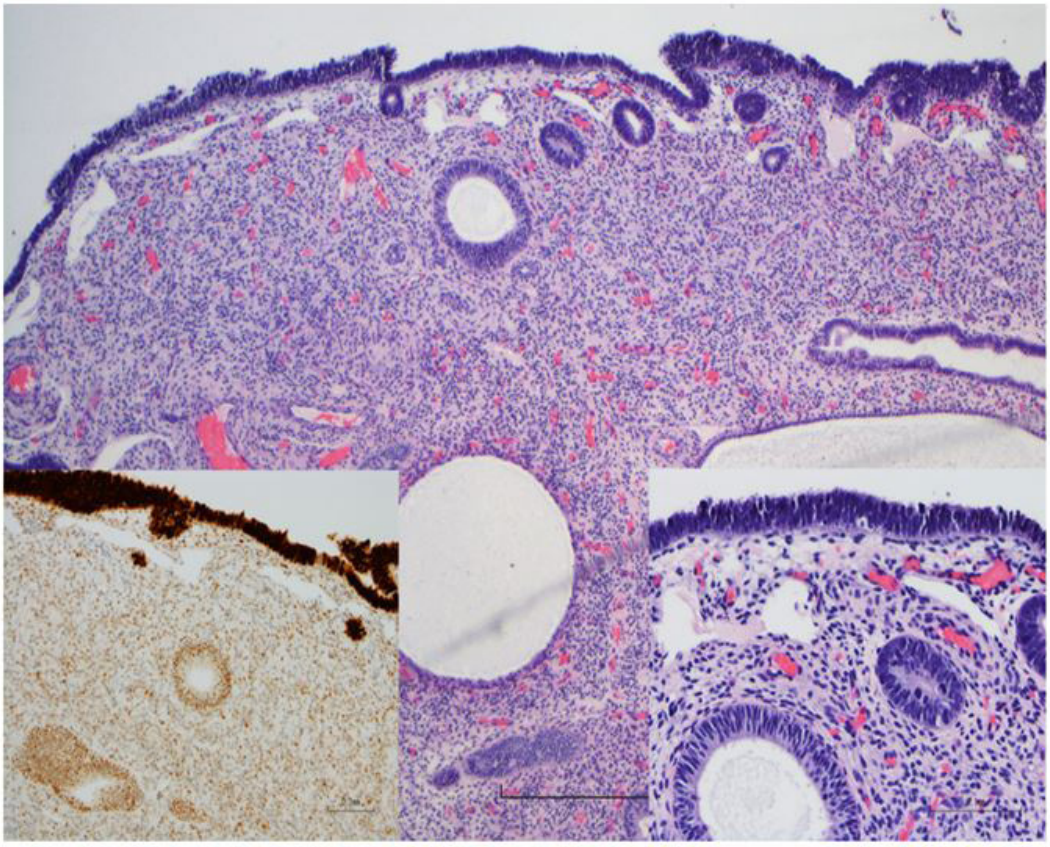

Figure 2: Patient E, a 61-year-old G2P2 woman with history of breast cancer that was treated 12 years prior to her presentation presented with postmenopausal bleeding. US showed endometrial thickening. Endometrial biopsy showed serous intraepithelial carcinoma in an endometrial polyp. She underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy and staging. She was found to have 0.7 out of 1.2 cm myometrial invasion with lymphatic invasions and 18 positive lymph nodes. P16 highlights the malignant cells

Discussion

Endometrial polyp is relatively common and has a 24% prevalence in the general population. The pathogenesis of endometrial polyp is not well known, although it is believed to be affected by unbalanced estrogen therapy, estrogen-like effect and unbalanced estrogen and progestins. Many estrogen mimics are produced by plants (phytoestrogens) and may behave as estrogen agonists. Recently, a case of a giant endometrial polyp due to the use of phytoestrogens in the daily routine diet for a long time has been reported [16].

Spontaneous endometrial polyp regression has been reported in women younger than 45, premenopausal women, small polyps (<2cm) and abnormal uterine bleeding [17]. The risk factors associated with malignant transformation varies and depends on patient's menstrual status. In perimenopausal women, polycystic ovary syndrome, polyp volume larger than 10 ml and increase polyp number are risk factors for malignant transformation [18]. Another study suggested that hysteroscopic polypectomy should be offered to women with risk factors to allow a reliable histologic evaluation. Hysterectomy should be recommended in the presence of atypical hyperplasia even after complete resection [19].

It has been shown that intraepithelial serous carcinoma has an unfavorable outcome even if the primary tumor is limited to the polyp and can metastasize without atypical invasive growth [20]. Although it was believed that there might be an association between this malignancy and Tamoxifen or breast cancer [21], further studies shown that the genetic factors like Lynch syndrome are responsible for increased risk of developing endometrial cancer [22-26].

Obesity seems to become a more prominent risk factor in postmenopausal women with an endometrial polyp. A recent study showed that the thickness of periperitoneal fat is a predictor of malignancy in overweight and obese women with endometrial polyp [27]. Another study showed that the body shape

index (ABSI), which evaluated abdominal adiposity, correlates with the presence of endometrial cancer/atypical hyperplasia. Both ABSI and BMI z scores might potentially be associated with endometrial carcinoma [28].

Postmenopausal bleeding is an alarming symptom that should be evaluated. Presence of endometrial cells in Pap tests in postmenopausal women, especially if they are atypical should be followed by an endometrial biopsy.

Limited number of patients in this study is its weakness, which requires further studies to confirm the finding. Current or remote history of obesity in all the patients is the strength of this study. Endometrial polyps in postmenopausal women, especially if it is symptomatic should be followed closely, especially in obese women.

Conflicts of Interest

The author has no conflict of interest and the article is not under consideration for publication elsewhere. This paper received no funding from any funding agency in the public, commercial or not-for-profit sectors.

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