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Original Article

Clinical and histopathological analysis of 1694 cases diagnosed with endometrial polyps based on endometrial sampling

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Abstract

Aim: All the patients presented to gynecology polyclinics with abnormal uterine bleeding either during the reproductive or the peri/postmenopausal period underwent endometrial sampling to exclude endometrial pathologies. One endometrial pathology frequently encountered in the histopathological examination of these samples is Endometrial Polyp (EP); and it is important that they are recognized as they require a distinct treatment plan and can be associated with endometrial malignancies.

Material and Methods: In this study, we investigated the demographic and clinical findings and concomitant malignancies of the cases diagnosed with endometrial polyps based on endometrial biopsy samples at Bezmialem Vakif University over a period of 7 years and compared our results with those in the literature.

Results: Our study determined an EP prevalence of 19% and only 11 (0.65%) of the 1694 cases were found to have "adenocarcinomas" within/outside the polyp.

Conclusion: Considering that EPs may be associated with malignancies, histopathological examination must absolutely be performed with adequate sampling.

Keywords: Abnormal Uterine Bleeding; Endometrial Polyp; Endometrial Malignancy With Polyp.

INTRODUCTION

Endometrial samples are among biopsies that are sent to the pathology laboratory most frequently. They are usually obtained to exclude endometrial malignancies and sometimes to reveal the benign organic causes of abnormal uterine bleeding. Abnormal uterine bleeding is among the most common causes of presentation to gynecological polyclinics. It is recommended to obtain endometrial samples in cases of ovulatory bleeding in patients younger than 35 years and in cases of abnormal bleeding in patients older than 35 years (1). Endometrial samples can be obtained via methods of dilation curettage, Pipelle biopsy, or hysteroscopy. The most common diagnoses reached based on endometrial samples were reported in the literature as; normal cyclic pattern and EP (2).

Endometrial polyps are benign lesions that can be pedunculated or sessile, and generally appear due to hyperplasia of endometrial stroma and gland structures (Figure 1). Although their prevalence varies in the literature (6-32%), it is around 25% on average (3-5). Their etiology is not known clearly. While they can be completely asymptomatic, they can also cause menometrorrhagia, infertility, or postmenopausal bleeding. EPs can be encountered at all ages but are most commonly detected between ages 40-49. All pathologies that could be found in the endometrium can also be encountered within EPs, including malignancies.

In our study, patients who had presented to the gynecology polyclinic due to various reasons and had been diagnosed with EPs based on the histopathological examination of their endometrial samples were evaluated with regard to their demographic data, presenting complaints, sampling methods, and coexisting malignancies in their histopathological examinations.

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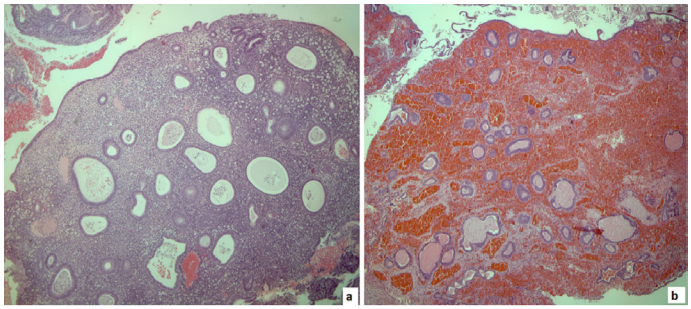

Figure 1. EPs are benign lesions that form due to hyperplasia of the endometrial gland and stroma (a,b) (H&Ex40)

MATERIAL and METHODS

Records of 8915 endometrial samples excluding hysterectomy materials (Pipelle biopsy, dilation curettage, hysteroscopic biopsy) that had been referred to the Bezmialem Vakif University Medical Faculty Pathology Laboratory between 2011-2018 were inspected and 1694 patients who had been diagnosed with EP based on histopathological examination were included in the study. Repeated presentations by one patient were recorded as a single presentation.

In addition, data such as presenting complaints, hormonal status (menopause etc.), as well as pathologies and malignancies associated with the polyp according to pathology reports were obtained from the hospital information management system and recorded.

RESULTS

Our laboratory received a total of 8915 endometrial samples between 2011-2018. Based on these samples, 1694 cases (19%) received a diagnosis of EP. The age range of the patients was determined as 26-89 and their median age as 45. Thousand six hundred and fifty-one (97.4%) of the 1694 cases were aged above thirty-five years, whereas 43 (2.6%) were aged below thirty-five years.

Two hundred and four (12.04%) of these cases were in the postmenopausal period. The age range of postmenopausal patients was 44-89. Presenting complaints or preliminary clinical diagnoses of the patients have been presented in Table 1.

Methods of endometrial sampling performed on symptomatic and asymptomatic patients and their ratios have been presented in Table 2.

For 391 cases (23.08%), morphology of the areasoutside the polyp was also provided in the histological examination report and these morphological findings have been presented in Table 3 (Figure 2).

Only 11 (0.65%) of the 1694 cases were found to have "adenocarcinoma" within/outside the polyp (Figure 3) and the ages, hormonal states, and preliminary clinical diagnoses of these cases have been presented in Table 4.

Table 1. Distribution of the patients based on their presenting complaints or preliminary clinical diagnosis

Complaint/Preliminary diagnosis	n	%
Abnormal Uterine Bleeding (Menorrhagia, menometrorrhagia)	917	54.13
Polyp	201	11.87
Myoma Uteri	162	9.56
Postmenopausal Bleeding	116	6.85
Endometrial Hyperplasia	58	3.43
Asymptomatic	240	14.16
Total	**1694**	**100**

Table 2. Methods used for endometrial sampling and their ratios

Method	n	%
Probe curettageor dilation curettage	1499	88.5
Pipelle biopsy	131	7.7
Hysterosco picbiopsy	36	2.1
Methodnot specified	28	1.7
Total	**1694**	**100**

Table 3. Histopathological changes in areas outside the polyp for 391 cases who had samples obtained from these areas

Morphology of areas outside the polyp	n	%
Proliferative endometrium	192	49.2
Secretory endometrium	129	33
Endometrial hyperplasia	59	15
Adenocarcinoma	11	2.8
Total	**391**	**100**

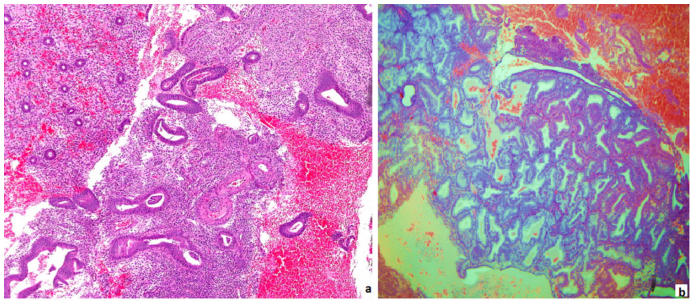

Figure 2. Proliferative endometrium associated with polyps findings in D&C (a) (H&Ex100). Endometrial hyperplasia in polyps (b) (H&Ex40)

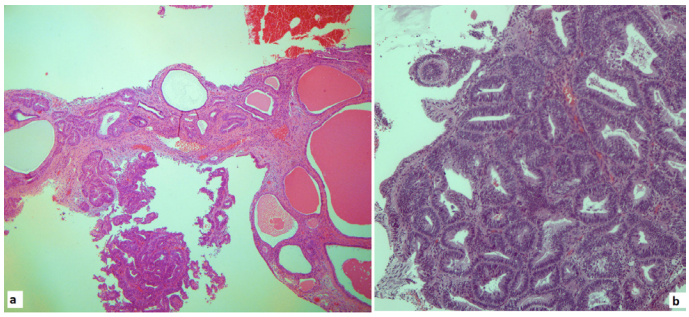

Figure 3. Adenocarcinoma in polyp (a,b) (H&Ex40 ve 100)

Table 4. Demographic data of patients who had concomitant adenocarcinomas

Patient	Age	Hormonal State	Complaint / Preliminary clinical diagnosis
1	80	Postmenopause	Postmenopausal Bleeding(PMB)
2	54	Postmenopause	Postmenopausal increase in thickness
3	**40**	**Premenopause**	**Abnormal uterine bleeding (AUB)**
4	69	Postmenopause	PMB
5	69	Postmenopause	PMB
6	68	Postmenopause	PMB, total prolapse
7	61	Postmenopause	PMB
8	51	Postmenopause	PMB
9	65	Postmenopause	PMB
10	71	Postmenopause	PMB
11	**42**	**Premenopause**	**AUB**

DISCUSSION

EPs are benign lesions that form due to hyperplasia of the endometrial gland and stroma. While the prevalence of EP was reported as 7.8% in a study by Dreisler et al. (6) and as 9.5% in a study by Kucur et al. (7), it was reported as 23.7% in a study conducted by Demirtas and colleagues (3). Meanwhile, this rate was 37.2% in a study done by Azatcam and colleagues. In our series, the prevalence of EP was 19%. As can be understood from these rates, the prevalence of EP is quite variable (7.8%-34.9%) in the literature (8). This variability in prevalence may be related to the patients being symptomatic or asymptomatic. Because, it is usually certain that samples will be obtained from symptomatic patients and examined. Of the patients in our study, 85.84% were symptomatic.

EPs are intrauterine pathologies that typically affect women in the reproductive period (9). While patients in the early reproductive period usually present due to infertility, those in the later reproductive period generally present with AUB. Of our cases, 54.13% presented with AUB and 14.16% were asymptomatic. Consistent with the literature, 87.96% of our cases were in the reproductive period. The median age of our cases was 45, resembling the results presented by Desteli and colleagues (5).

In a study by Aslan, 12.34% of premenopausal patients and 13.46% of postmenopausal patients were diagnosed with EP (6). Similarly, 12.04% of our cases were postmenopausal. However, while the study by Aslan included 424 cases, our series consisted of 1694 cases.

In their study, Inal and colleagues discussed biopsy indications and the effectiveness of biopsy methods in the differential diagnosis of AUB (1). They reported that endometrial biopsies were performed on 70% of cases who presented with AUB, 67.3% of these biopsies resulted in a diagnosis of proliferative-secretory endometrium, and that this diagnosis was confirmed by hysterectomy in 85% of these cases (1). Moreover, they emphasized that endometrial samples were obtained from patients who presented with AUB in order to make a differential diagnosis along with their ultrasonographic findings(1,8). However, Radwan et al. (10) stated that the "gold standard" diagnostic method for EP was hysteroscopy. In our study, 88.5% of the cases were diagnosed based on probe curettage or dilation curettage, while only 2.1% were diagnosed based on hysteroscopic biopsy. It can be concluded according to these data thatan EP diagnosis can be easily made with adequate curettage material but the hysteroscopic method can be preferred if the procedure is expected to allow treatment in addition to diagnosis.

Although various studies have investigated EP and coexisting malignancies, we did not find any data regarding the presence of endometrial samples of areas outside the polyp and their histology. Of our cases, 23.08% (n=391) had pathology reports specifying the morphology of the areasoutside the polyp and the most common finding in these areas was determined to be proliferative endometrium (49.2%).

Adenocarcinomas originating from EP have been reported at different rates in different studies. Antunes and colleagues reported this rate as 2.7% (11), Ben-Arie and colleaguesas 3% (12), and Fernandez Parra and colleagues as 1.5% (13). This rate was determined as 0.65% in our series. These differences between incidence rates may be connected to the differences between diagnostic methods (D&C, Pipelle, Hysteroscopic biopsy) (14).

Although it was investigated whether or not EPs possessed cancerous properties, the data were not reliable and histopathological examination is an absolute requirement for definitive diagnosis (15). Lee and colleagues reported that symptomatic patients in the postmenopausal period were under a greater risk of developing malignancies (16). Moreover, Ferrazzi and colleagues reported that the risk of developing malignancies was 10-fold higher for symptomatic patients, and a study by Gonenc et al reported a 7-fold increase compared to asymptomatic patients (10, 17). Of our cases who had concomitant EP and adenocarcinoma, nine (81.8%) were symptomatic and two (18.2%) were asymptomatic.

CONCLUSION

In conclusion; EPs are among pathologies that cause reproductive and postmenopausal patients to frequently present to gynecology polyclinics. It must be considered that EPs could be associated with malignancies and histopathological evaluation must absolutely be performed with adequate sampling, particularly in symptomatic patients.

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