THE HISTOPATHOLOGIC CORRELATION OF DILATATION & CURETTAGE AND HYSTERECTOMY SPECIMENS IN PATIENTS WITH POSTMENOPAUSAL BLEEDING

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SUMMARY

The aim of this study was to evaluate the consistency of preoperative and postoperative histopathological findings in postmenopausal patients with bleeding. 42 postmenopausal women presenting with the complaint of bleeding to whom both dilatation&curettage (D&C) and hysterectomy were performed were examined retrospectively regarding their pathology results. Each patient's D&C and hysterectomy pathology result were compared and the consistency of preoperative and postoperative findings were evaluated by the correlation analyses. Histopathologic evaluation of specimens were performed by the pathologists specialized on gyneacologic pathology and endometrial hyperplasias were described by terms endorsed by the International Society of Gynecological Pathologists. Pathology examination of D&C and hysterectomy specimens of 42 menopausal patients were studied and the consistency of preoperative and postoperative findings were examined. The distribution of preoperative diagnosis was 16 patients (38%) with irregular proliferative endometrium, 14 patients (33%) with simple hyperplasia, 4 patients (9.5%) with complex hyperplasia without atypia, 3 patients (7.14%) with complex hyperplasia with atypia and 3 patients (7.14%) with endometrial polyp. In one patient (2.38%), it was reported that there was no material in D&C and in one patient (2.38%) endometrium cancer was found preoperatively. The distribution of postoperative diagnosis was 16 patients (38%) with irregular proliferative endometrium, 12 patients (28.5%) with simple hyperplasia, 5 patients (11.9%) with complex hyperplasia without atypia, 4 patients (9.5%) with complex hyperplasia with atypia, 3 patients (7.14%) with endometrium cancer and 2 patients (4.76%) with endometrial polyp. The correlation analysis of these variables has shown that there was a positive correlation between variables (correlation coefficient: 0.98). This means that the preoperative diagnosis correlates positively with the postoperative diagnosis. However, when preoperative diagnosis group was subgrouped and reanalysed, it seems that while the preoperative diagnosis gets worse, D&C may skip the real and much worse pathology. Generally preoperative D&C endometrial pathology findings positively correlate with post operative hysterectomy pathology results. However, as the real pathology gets worse, D&C seems to underdiagnose the real pathology and in cases with complex hyperplasia with or without atypia, a second D&C or hysterescopic evaluation in order to get biopsies from suspicious areas may be recommended.

INTRODUCTION

Endometrial hyperplasia is a spectrum of morphologic and biologic alterations of the endometrial glands and stroma extending from hyperestrogenic state which is an exaggerated physiological condition to carcinoma *in situ* [2]. Clinically significant hyperplasias usually evolve within a backround of proliferative endometrium as a result of protracted estrogen stimulation in the absence of progestin influence. Endometrial hyperplasias are clinically significant because they cause abnormal bleeding. These pathologies can occur in the presence of obesity, hypertension, diabetes mellitus, estrogen producing ovarian tumors and they can precede or occur simultaneously with endometrial cancer [8].

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Endometrial hyperplasias are classified based on their cytologic (atypia present / absent) and architectural (simple / complex) characteristics. The correct diagnosis is quite important because decision of medical or surgical treatment is based on these findings. Progestin therapy is very effective in reversing endometrial hyperplasias without atypia but it has no role in the presence of atypia [5,9]. In this study, we examined the consistency of pathologic findings of dilatation & curettage and hysterectomy performed thereafter in women with irregular bleeding.

MATERIALS and METHODS

42 menopausal patients who applied to Istanbul Medical School Obstetrics and Gyneacology Department between September 2000 - September 2002 with complain of irregular bleeding or increased endometrial thickness were enrolled into the study. All the patients underwent both dilatation & curettage and hysterectomy procedures and examined retrospectively regarding their pathology results. The consistency of endometrial pathology results gathered from both D&C and hysterectomy were studied. Curettage and histerectomy specimens were examined by the pathologists specialized on gynecologic pathology. Endometrial pathologies were described based on definitions suggested by the International Society of Gynecological Pathologists and adopted by WHO.

The preoperative diagnosis that were gathered from D&C were classified as endometrial polyp irregular proliferative endometrium, simple hyperplasia without atypia, simple hyperplasia with atypia, complex hyperplasia without atypia, complex hyperplasia with atypia and endometrial cancer. Each patient's postoperative hysterectomy specimen pathology result was compared with her D&C pathology result. One patient whose preoperative diagnosis was "no material, blood and coagulum" was also included into study because of her quite significant postoperative pathology result. The correlation analysis of these variables were studied by Spearman's correlation test.

RESULTS

Pathology examination of D&C and hysterectomy specimens of 42 patients were retrospectively studied and the consistency of preoperative and posoperative findings was examined. Indications of D&C were bleeding in menopause and abnormal endometrial thickness in TVUSG (≥5 mm in HRT non users and in women using continuous uninterrupted hormonal therapy, ≥ 8 mm in women using cyclic interrupted hormonal therapy).

The distribution of preoperative diagnosis was 16 patients (38%) with irregular proliferative endometrium, 14 patients (33%) with simple hyperplasia without atypia, 4 patients (9.5%) with complex hyperplasia without atypia, 3 patients (7.14%) with complex hyperplasia with atypia and 3 patients (7.14%) with endometrial polyp. In one patient (2.38%), it was reported that there was no material in D&C. Also, endometrium cancer was found in one patient (2.38%) after D&C.

When we examined postoperative diagnosis, the distribution of patients was 16 patients (38%) with irregular proliferative endometrium, 12 patients (28.5%) with simple hyperplasia without atypia, 5 patients (11.9%) with complex hyperplasia without atypia, 4 patients (9.5%) with complex hyperplasia with atypia, 3 patients (7.14%) with endometrium cancer and 2 patients (4.76%) with endometrial polyp.

Since the important point of analysis would be the consistency of preoperative and post-

Table 1. A general table: 42 patients with each preoperative and postoperative diagnosis

Patient no	Preoperative Diagnosis	Postoperative Diagnosis
1	Simple hyperplasia without atypia	Irregular proliferative endometrium
2	Simple hyperplasia without atypia	Complex hyperplasia without atypia
3	Complex hyperplasia with atypia	Complex hyperplasia with atypia
4	Irregular proliferative endometrium	Simple hyperplasia without atypia
5	Complex hyperplasia with atypia	Endometrium Cancer
6	Simple hyperplasia without atypia	Simple hyperplasia without atypia
7	Complex hyperplasia without atypia	Complex hyperplasia without atypia
8	Complex hyperplasia without atypia	Complex hyperplasia with atypia
9	Simple hyperplasia without atypia	Irregular proliferative endometrium
10	Irregular proliferative endometrium	Irregular proliferative endometrium
11	Simple hyperplasia without atypia	Irregular proliferative endometrium
12	Simple hyperplasia without atypia	Simple hyperplasia without atypia
13	Irregular proliferative endometrium	Irregular proliferative endometrium
14	Endometrial Polyp	Endometrial Polyp
15	Irregular proliferative endometrium	Irregular proliferative endometrium
16	Simple hyperplasia without atypia	Simple hyperplasia without atypia
17	Irregular proliferative endometrium	Simple hyperplasia without atypia
18	Irregular proliferative endometrium	Irregular proliferative endometrium
19	Irregular proliferative endometrium	Complex hyperplasia without atypia
20	Blood and coagulum	Simple hyperplasia without atypia
21	Simple hyperplasia without atypia	Irregular proliferative endometrium
22	Endometrium Cancer	Endometrium Cancer
23	Irregular proliferative endometrium	Irregular proliferative endometrium
24	Irregular proliferative endometrium	Irregular proliferative endometrium
25	Simple hyperplasia without atypia	Simple hyperplasia without atypia
26	Irregular proliferative endometrium	Simple hyperplasia without atypia
27	Endometrial Polyp	Simple hyperplasia without atypia
28	Irregular proliferative endometrium	Irregular proliferative endometrium
29	Simple hyperplasia without atypia	Irregular proliferative endometrium
30	Irregular proliferative endometrium	Irregular proliferative endometrium
31	Simple hyperplasia without atypia	Irregular proliferative endometrium
32	Complex hyperplasia without atypia	Simple hyperplasia without atypia
33	Simple hyperplasia without atypia	Complex hyperplasia with atypia
34	Irregular proliferative endometrium	Irregular proliferative endometrium
35	Complex hyperplasia with atypia	Endometrium Cancer
36	Complex hyperplasia without atypia	Complex hyperplasia with atypia
37	Simple hyperplasia without atypia	Irregular proliferative endometrium
38	Irregular proliferative endometrium	Complex hyperplasia without atypia
39	Irregular proliferative endometrium	Simple hyperplasia without atypia
40	Endometrial Polyp	Simple hyperplasia without atypia
41	Simple hyperplasia without atypia	Complex hyperplasia without atypia
42	Irregular proliferative endometrium	Simple hyperplasia without atypia

operative diagnosis of each patient, Spearman's correlation analysis was performed on the variables. Correlation coefficient was found to be 0.98 and it was seen that there was a positive correlation between variables. (table 1).

Each preoperative diagnosis was also subgrouped and correlation with the post operative diagnoses was studied. (table 2, table 3) It was seen that simple hyperplasia tended to be overdiagnosed in endometrial curettings. Of the 14 patients with preoperative diagnosis of simple hyperplasia, 7(50%) of them got the postoperative diagnosis of irregular proliferative endometrium (table 3). However, it was seen that while the preoperative diagnosis got worse, the possibility of skipping the real and much worse pathology, with D&C increased. Although patients number was small, out of 4 patients with preoperative diagnosis of complex hyperplasia without atypia, 2 of them (50%) got the post operative diagnosis of complex atypical hyperplasia. Similarly, among 3 patients whose preoperative diagnosis was complex atypical hyperplasia, 2 of them got the postoperative diagnosis of endometrium cancer.

DISCUSSION

Endometrial hyperplasia encompasses a spectrum of progressively worsening changes in endometrial gland and stroma under the effect of unprotracted estrogen influence [2]. This spectrum starts as irregular proliferative endometrium occurring under the hyperestrogenic effect and it progresses to complex atypical hyperplasia with areas of adenocarcinoma [5,9]. The factors underlying to endometrial hyperplasia are obesity, diabetes mellitus, hypertension, estrogen producing ovarian tumors, anovulation, nulliparity, and hormonal treatments [8]. The correct diagnosis of endometrial hyperplasias are clinically important, because these pathologies may be precursor lesions of endometrium cancer. So, all effort should be focused on the early recognition and treatment of this benign condition before it progresses to endometrial carcinoma [1].

The risk of endometrial hyperplasia progressing to carcinoma is related to presence and severity of cytologic atypia [5]. It has been shown that progression to carcinoma occurs in 1% of patients with simple hyperplasia, 3% of patients with complex hyperplasia, 8% of patients with atypical simple hyperplasia, 29% of patients with atypical complex hyperplasia [7]. Sampling of endocervical and endometrial tissue in order to reach a diagnosis in abnormal uterine bleedings is accomplished classically by dilatation & curettage technique. Besides this classical technique, Pipelle endometrial sampling and hysterescopy can be used for this purpose as well. In usual practice, office endometrial aspiration biopsy is accepted the first step in evaluating a patient with abnormal uterine bleeding or suspected endometrial pathology. Although the diagnostic accuracy of office based endometrial biopsy has been shown to be %90- 98 when compared with subsequent findings at D&C or hysterectomy, adequate

Table 2. Postoperative histopathologic findings in 16 patients diagnosed as having irregular proliferative endometrium on curettage specimens.

Post-op diagnosis	Patient number (n)	%
Irregular proliferative endometrium	9	56.25
Simple hyperplasia without atypia	5	31.25
Complex hyperplasia without atypia	2	12.25

Table 3. Postoperative histopathologic findings in 14 patients diagnosed as having simple hyperplasia without atypia on curettage specimens

Post-op diagnosis	Patient number (n)	%
Irregular proliferative endometrium	7	50
Simple hyperplasia without atypia	3	21.42
Complex hyperplasia without atypia	2	14.28

tissue sampling may be difficult in older menopausal women with cervical stenosis. Hysterescopy is more accurate in identifying polyps and submucous myomas than endometrial biopsy or D&C alone. Although there are many studies comparing adequate tissue sampling power of these techniques, it seems that D&C is still the gold standard [3,6,10]. However in the literature there are not many studies focusing on how much this gold standard method of endometrial sampling reflects the real endometrial pathology.

A single curettage will not remove all of the surface endometrium completely from the uterine cavity. Repeated studies have demonstrated the inability of a thorough curettage to remove more than 50 to 60% of the endometrium when the procedure has been done by experienced gynecologists immediately before a planned hysterectomy. Stock and Kanbour designed a study and performed prehysterectomy D&C and examined the area of endometrium curettaged postoperatively. They observed that in 60% of hysterectomy specimens studied, less than 50% of endometrial surface had been removed by a prehysterectomy curettage. They also found that 26 cases of endometrial carcinoma that had been classified as clinically normal appearing tissue on prehysterectomy curettage [11].

In our study, we aimed to evaluate D&C accuracy by comparing preoperative curettage pathology results with postoperative hysterectomy specimen examinations. It was shown that preoperative diagnosis were positively correlated with post operative diagnosis (correlation coefficient:098). This means that when the all patient population is taken into consideration, preoperative D&C accurately reflects postoperative diagnosis. However, when the preoperative diagnosis are subgrouped and data are re-analyzed, it reveals that while the preoperative diagnosis gets worse, D&C may skip the real and much worse pathology. Although patients number was small, out of 4 patients with preoperative diagnosis of complex hyperplasia without atypia, 2 of them (50%) got the post operative diagnosis of complex atypical hyperplasia. Similarly, among 3 patients whose preoperative diagnosis was complex atypical hyperplasia, 2 of them got the postoperative diagnosis of endometrium cancer. One remarkable point is that in one case, although no material was reported in D&C, hysterectomy specimen revealed simple hyperplasia. Gundem et al has also studied the preoperative and postoperative correlation of histopathological findings in cases of endometrial hyperplasia and they showed statistically insignificant correlation between variables. But in this study each diagnosis group was not analysed seperately [14].

In conclusion, endometrial hyperplasias are clinically significant lesions because of their potential to accompany or proceed to endometrial cancer. The accurate diagnosis and histopathologic classification of these lesions is so much important because of their medical treatment potential unless atypia is present. Dilatation & curettage is the most frequently used and seemingly the gold standard technique of endometrial tissue sampling for diagnosis. Generally D&C reflects the real endometrial pathology accurately, however, the accuracy of D&C decreases while the real pathology gets worse. In cases with complex hyperplasias with or without atypia, a second D&C or hysterescopic evaluation in order to get biopsies from suspicious areas may be recommended.

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