Correlation and Analysis of Endometrial Biopsy Histology with Post Hysterectomy Histopathology

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Abstract: Endometrium remains the most sensitive indicator of ovarian function and endometrial biopsy is one of the diagnostic procedures in endometrial pathology. The current study was carried out to examine the morphological pattern of endometrial biopsies and find the Correlation between Endometrial Biopsy Histology with Post hysterectomy Histopathology. This retrospective study was conducted in OBG Department, SUIMS, Shimoga. Histopathology reports of 144 patients who underwent endometrial biopsy (which included both D&C and endocoele) between June 2013 to August 2017 were analyzed to study the morphological pattern. Pre-operative and post-operative histopathology reports of 38 patients who underwent hysterectomy subsequently were compared to know the concordance rate. Out of 144 patients who underwent endometrial biopsy, average age group of patient was 36 years, common finding was simple hyperplasia without atypia (43%), normal endometrium (23%), complex hyperplasia without atypia (7%), complex hyperplasia with atypia (3%), endometrial polyp (0.5%), endometrial carcinoma (0.4%). Concordance rate between endometrial biopsy and hysterectomy histopathology was 78.9%. No coexisting malignancy was reported in cases of atypical endometrial hyperplasia. Concomitantly, 2 had endometrial polyps, 5 had leiomyoma, 2 had adenomyosis, detected only after hysterectomy. Endometrial biopsy has good sensitivity in diagnosis of endometrial pathology in women with AUB and pre-operative endometrial histology (both D&C and endocoele) correlates well with hysterectomy histopathology.

Keywords: Endometrial biopsy, endometrial polyp, endometrial hyperplasia.
for therapeutic purposes, cases where both slides and blocks could not be found or had inadequate clinical details. Cases where the diagnostic method was not D&C/ endocel prior to hysterectomy and those where endometrial biopsy of a patient was not due to AUB were also excluded. In this study, any type of hyperplasia, malignancy, endometritis and endometrial polyps was considered as pathology or disease, and other cases were considered as normal.

Statistical Analysis
Analysis was performed using the SPSS program version 20.

RESULTS
Histopathology reports of 144 patients who underwent endometrial biopsy (which included both D&C and endocel) between June 2013 and August 2017 were analysed to study morphological patterns of endometrial biopsies. The average age of patients was 36 years. The duration of bleeding in 48.2% of the patients was less than 6 months.

The most Common finding was simple hyperplasia without atypia (43%), followed by normal endometrium (23%), simple hyperplasia with atypia (5.5%), complex hyperplasia without atypia (7%), complex hyperplasia with atypia (3%), endometrial polyp (0.5%), endometrial carcinoma (0.4%). Figure 1 and Table 1.

Fig-1: Morphological patterns of endometrial biopsies

Table-1: Distribution of morphological patterns of endometrial biopsies

<table>
<thead>
<tr>
<th>Patterns</th>
<th>Number (N=144)</th>
</tr>
</thead>
<tbody>
<tr>
<td>simple hyperplasia without atypia</td>
<td>63</td>
</tr>
<tr>
<td>simple hyperplasia with atypia</td>
<td>8</td>
</tr>
<tr>
<td>Proliferative endometrium</td>
<td>22</td>
</tr>
<tr>
<td>Secretory endometrium</td>
<td>10</td>
</tr>
<tr>
<td>Biphasic endometrium</td>
<td>10</td>
</tr>
<tr>
<td>complex hyperplasia without atypia</td>
<td>11</td>
</tr>
<tr>
<td>complex hyperplasia with atypia</td>
<td>4</td>
</tr>
<tr>
<td>Atrophic endometrium</td>
<td>6</td>
</tr>
<tr>
<td>endometritis</td>
<td>5</td>
</tr>
<tr>
<td>CA endometrium</td>
<td>1</td>
</tr>
<tr>
<td>Disordered proliferative phase</td>
<td>3</td>
</tr>
</tbody>
</table>

The Concordance rate between endometrial biopsy and hysterectomy histopathology was 78.9%. The Agreement between endometrial biopsy and hysterectomy findings for various histologist are shown in Figure 2 and table 2.
Fig-2: Concordance rate between endometrial biopsy and hysterectomy

DISCUSSION

Abnormal uterine bleeding is a common problem of all gynecological consultations [6]. The main aim of investigating these women is to rule out endometrial cancer and its precursor lesion and endometrial hyperplasia. The probability of endometrial cancer in women presenting with postmenopausal bleeding is 10% and approximately 15% for endometrial hyperplasia.

The most common histological diagnostic category was simple hyperplasia without atypia (43%) followed by normal functional endometrium, accounting for 23% of the cases. This is in contrast to previous studies from Maiduguri (55.7%) [7], Lagos (50.9%) [8], Ilorin (67.6%) [9] and Ibadan (72.8%) [10] which showed predominantly normal functional endometrium. Endometritis accounted for 3.47% of cases in the present study. This is relatively in agreement with the figures of study by Ilorin [9].

The majority of the cases of endometrial hyperplasia in the present study were classified as simple endometrial hyperplasia accounting for 73.25% of cases and this is in tandem with what was reported in previous studies [7,9]. Endometrial carcinoma accounted for 0.69% of endometrial biopsies. This low frequency of endometrial carcinoma is in keeping with the observation that the frequency of occurrence of endometrial carcinoma is much lower in the Indian subcontinent.

Concordance rate between endometrial biopsy and hysterectomy histopathology was 78.9%. On performing hysterectomy, none of the 86 patients with Simple or complex hyperplasia had endometrial cancer. In a study by Jesadapatrakul et al. [11] on 46 patients with endometrial hyperplasia, the general consistency rate of curettage and hysterectomy was 41.3%. The consistency rate in patients with atypical endometrial hyperplasia was 62.5% and in patients with nonatypical endometrial hyperplasia was 30%.

In the present study, no patient with an endometrial polyp was diagnosed by D&C. According to Radwan et al. [12] the gold standard method in the diagnosis of endometrial polyps is hysteroscopy, which is a diagnostic and treatment method. The other effective method is sonohysterography, which is a safe method with high sensitivity and specificity, and its diagnostic value is approximately equal to that of hysteroscopy. Therefore, diagnostic curettage is not an appropriate method for the diagnosis of endometrial polyps according to the findings of our study and the study by Radwan et al. [12].

Study limitations.

Low sample size to determine the diagnostic value of endometrial biopsy in each endometrial pathology. Using larger samples, one can obtain results that are more precise in this regard.

In conclusion, endometrial biopsy has good sensitivity in diagnosis of endometrial hyperplasia, acceptable sensitivity in the diagnosis of endometrial cancer, and endometrial biopsy histology correlates well with post hysterectomy histopathology. It has very low sensitivity in the diagnosis of endometrial polyps.

REFERENCES


