ORIGINAL RESEARCH PAPER

Pathology

KEY WORDS: endometrial curettage, histopathology

EVALUATION OF ENDOMETRIAL CURETTAGE SAMPLES AND THEIR HISTOPATHOLOGICAL CATEGORISATION: A ONE YEAR STUDY

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ABSTRACT

Introduction: Endometrial samples are one of the most common samples in histopathology and are carried out for a number of indications which include evaluation of a case of abnormal uterine bleeding, cancer screening, particularly following medications such as tamoxifen that are associated with endometrial abnormalities , evaluation of infertility, endometrial dating. The aim of our study was to evaluate the histopathological changes seen in endometrial curettage samples and to correlate with clinical findings.
Materials and methods: A one year study was carried out in which all endometrial curettage samples received were evaluated. Clinical details of the patients were recorded and specimen were processed according to standard protocol and stained with Hematoxylin and eosin. The histopathological diagnosis were noted.
Results: A total of 44 endometrial curettage samples were received during this period. The most common presenting complaint was menometrorrhagia. The most common age group of the patients was 40-49 years (34.09% cases) followed by 30-39 years (27.3% cases). The histopathological diagnosis included proliferative endometrium, secretory endometrium, atrophic endometrium, endometrial hyperplasia, disordered proliferative endometrium, endometrial polyp, products of conception, pseudodecidual changes. The most common pattern observed was proliferative endometrium.
Conclusion: Endometrial curettage samples are one of the commonest samples in the histopathology section and the correct histopathological evaluation of these is essential for proper patient care.

INTRODUCTION:

Endometrial samples are one of the most common samples in histopathology and are carried out for a number of indications which include evaluation of a case of abnormal uterine bleeding, cancer screening, particularly following medications such as tamoxifen that are associated with endometrial abnormalities , evaluation of infertility, endometrial dating. (1) The most commonly employed endometrial sampling techniques are dilation and curettage and endometrial biopsy. (1) The endometrium may also be examined as part of a hysterectomy specimen. Endometrial curettings and biopsies exhibit a wide range of histopathological patterns due to both normal and abnormal cyclical changes, drugs, hormones, infections and malignancies, posing a challenge to the pathologist. (2)

Abnormal uterine bleeding(AUB) is one of the most commonly encountered condition in adult women which is defined as bleeding that differs in frequency, duration and amount from a pattern observed during a normal menstrual cycle. (3) It may be associated with any type of endometrium ranging from normal endometrium to hyperplasia, irregular ripening, chronic menstrual irregular shedding and atrophy. (4) The gold standard for diagnosis of the cause of AUB is histopathological examination of endometrial biopsies and curettage sample. (5)

According to some studies infertility is the most common indication for endometrial biopsy and secretory phase endometrium as the commonest morphologic pattern encountered in endometrial specimen. (6) Interpretation of endometrial specimen requires an accurate clinical history, knowledge of menstrual status, and the date of last menstrual period and history of hormonal or drug therapy. (7)

The aim of our study was to evaluate the histopathological changes seen in endometrial curettage samples and to correlate with clinical findings.

MATERIALS AND METHODS:

A one year study was carried out in the histopathology section of the pathology department of a government medical college from January 2018 to January 2019. All endometrial curettage samples received during this period were evaluated. Clinical details of the patients were recorded and specimen were processed according to standard protocol and stained with Hematoxylin and eosin. The histopathological diagnosis were noted. Hysterectomy specimen were not included in the study.

RESULTS AND OBSERVATIONS:

A total of 44 endometrial curettage samples were received during this period. The most common presenting complaint was menometrorrhagia. The most common age group of the patients was 40-49 years (34.09% cases) followed by 30-39 years (27.3% cases). This could be attributed to the fact that most of the older women came with hysterectomy and were not included in our study. Samples were inadequate/non diagnostic in 11.4% cases. The histopathological diagnosis included proliferative endometrium, secretory endometrium, atrophic endometrium, endometrial hyperplasia, disordered proliferative endometrium, endometrial polyp, products of conception, pseudodecidual changes. In 3 cases, only endocervical tissue was sampled. No cases of malignancy were seen in our study.

Table 1. showing the histopathological diagnosis encou ntered in our study

Histopathological diagnosis	Number of cases
Proliferative endometrial glands	16
Secretory endometrium	7
Atrophic endometrium	2
Disordered proliferative endometrium	2
Endometrial hyperplasia without atypia	3
Endometrial hyperplasia with atypia	1
Products of conception	3
Endometrial polyp	2
Pseudodecidual changes	1
Endocervical tissue	3
Material inadequate/non diagnostic	4

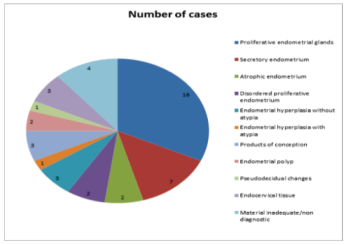

Table 2 showing age wise distribution of cases with diagnosis

Age in yrs	Number of cases	Diagnosis	Number of cases
10-19	1	Products of conception	1
20-29	11	Proliferative endometrium	5
		Secretory endometrium	1
		Simple hyperplasia without atypia	1
		polyp	1
		Product of conception	1
		Non diagnostic	2
30-39	12	Proliferative endometrium	4
		Secretory endometrium	5
		Simple hyperplasia without atypia	1
		Products of conception	1
		Disordered proliferative endometrium	1
40-49	15	Proliferative endometrium	7
		Secretory endometrium	1
		Simple hyperplasia without atypia	1
		Endometrial hyperplasia with atypia	1
		Disordered proliferative endometrium	1
		Endometrial polyp	1
		Atrophic endometrium	1
		Endocervical tissue	2
50-59	3	Atrophic endometrium	1
		Endocervical tissue	1
		Non diagnostic	1
60-69	2	Pseudodecidual changes	1
		Non diagnostic	1

DISCUSSION:

Most commonly affected age group was 40-49 years. The most common presenting symptom of the patients was menometrorrhagia while the most common histological findings were proliferative and secretory endometrium. This was consistent with the findings of Inal et al. (8) Proliferative phase endometrium was seen in 36.4% of the cases while secretory endometrium was seen in 16% of the cases. Gopalan U et al found proliferative endometrium to be the most common histopathological finding in 47.3% followed by secretory endometrium in 16.1 %. (9) Chary N et al found proliferative endometrium- the most common finding at 60% followed by secretory endometrium in 17 % of cases. (10) The endometrial hyperplasia is a precursor of endometrial carcinoma; progression to carcinoma was reported as 1%–3% in hyperplasia without atypia and 8%–29% in hyperplasia with atypia. (11) In our study, endometrial hyperplasia was seen in 9.1% of the cases. This is consistent with the findings of Inal et al ,Kucer et al and Truncer et al who reported the rate of endometrial hyperplasia between 9-10%. (8) (12) Malignancy is an important differential diagnosis to be considered in women of perimenopausal age group presenting with abnormal uterine bleeding and needs to be diligently ruled out. However we did not encounter any case of malignancy during our study period.

Atrophic endometrium is a common cause of bleeding in postmenopausal women. (13) The probable cause is the presence of thin walled veins, superficial to the expanding cystic glands, which are vulnerable to injury and lead to excessive uterine bleeding. (14) In our study, atrophic endometrium comprised of 4.5% of the cases. Products of conception accounted for 6.8% of the cases which endometrial polyp comprised 4.5% of all cases.

Disordered proliferative endometrium is characterised by a proliferative endometrium with cystic dilation of glands focally that do not have secretions with glands > twice the normal size (usually 3-4x normal), irregular contour and more than four glands involved dilated. The stroma shows condensation with balls of stromal tissue due to endometrial breakdown. (15) We found a diagnosis of disoredered proliferative endometrium in 4.5% of the cases.

Padhye et al reported the occurrence of disordered proliferative endometrium in 8.7% of cases (16) while Kaur et al reported it in 6% of cases. (17)

Specimen were categorised as inadequate/non diagnostic when no endometrial tissue was present or when no definite diagnosis could be done even in presence of some tissue. 9.1% of our cases fell into this category. Most of these samples had hemorrhage ,degenerated tissue and inflammatory cells with some having occasional fragmented glands. In 6.8% of our cases, endocervical tissue was sampled instead of endometrial tissue.

CONCLUSION:

Endometrial curettage samples are one of the commonest samples in the histopathology section and the correct histopathological evaluation of these is essential for proper patient care. Apart from ruling out endometrial carcinoma, it is important to correctly identify endometrial hyperplasias as these may be the forerunners of malignancy. The lesions encountered may range from normal physiological changes to pathological conditions. Histopathological evaluation is indispensable in correctly identifying the cause of abnormal uterine bleeding.

Figures:

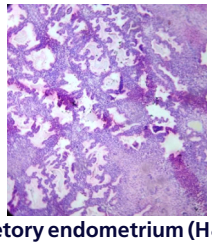

Fig.1 showing secretory endometrium (H&E, 40X)

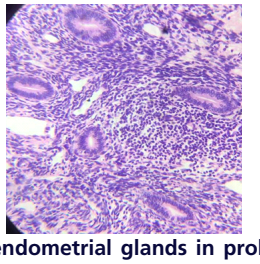

Fig 2. Showing endometrial glands in proliferative phase (H&E, 40X)

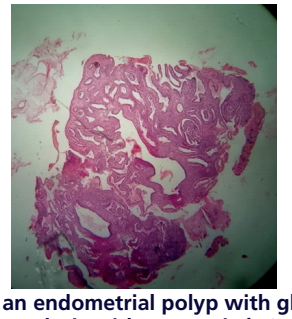

Fig 3. Showing an endometrial polyp with glands showing endometrial hyperplasia without atypia (H&E, 40X)

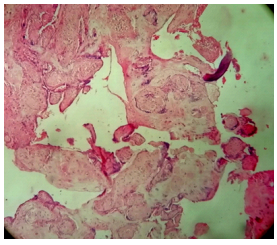

Fig 4. Showing endometrial tissue with products of conception. (H&E, 40X)

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