



Histopathological Analysis of Hysterectomy Specimens in a Tertiary Care Centre: Study of 100 Cases

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KEYWORDS

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ABSTRACT:

Introduction: The female genital tract includes the uterine corpus and cervix, the uterine corpus consists of endometrium and myometrium. Uterus, a vital reproductive organ is subjected to many benign and malignant pathologies

Aims: To study various gross and histopathological findings in uterus and cervix of the hysterectomy specimens received and their clinicopathological correlation.

Materials and method: The present study was a observational study. This Study was conducted from 18 months at department Obstetrics and Gynaecology, Calcutta National Medical College and Hospital, Kolkata. Total 100 patients were included in this study.

Result: In our study, 60 (60%) patients had Fibroid, 20 (20%) patients had Utero-vaginal prolapse, 5 (5%) patients had Adenomyosis, 8(8%) patients had Abnormal uterine bleeding 6 (6%) patients had endometrial polyp and 1 (1%) patient had abdominal mass. The value of z is 9.0614. The value of p is < .00001. The result is significant at p < .05.

Conclusion: In conclusion, the histopathological analysis of hysterectomy specimens in a tertiary care center provides invaluable insights into the spectrum of uterine, cervical, and adnexal pathologies that warrant surgical intervention. This study highlights the importance of routine histopathological evaluation in ensuring accurate diagnosis, even in cases where clinical findings may not fully predict underlying pathology. Understanding the various benign and malignant conditions uncovered can aid in refining clinical approaches, enhancing patient management, and improving outcomes.

INTRODUCTION

The uterine corpus, which is made up of the endometrium and myometrium, and the cervix are parts of the female genital tract. [1] The uterus is a crucial reproductive organ that can develop a variety of benign and malignant diseases. [2] The endometrial mucosa of the uterine corpus is periodically removed due to hormonal influences. The majority of patient visits to

gynecologists are caused by lesions of the uterine corpus and cervix. [3]. Although there are many treatment options available now, such as conservative surgery and medication, hysterectomy is still the most recommended way to treat gynecological problems.[4]

Hysterectomy is the removal of the uterus and it is the most common gynecological procedure performed in the females worldwide, as it is affected by various non-



neoplastic and neoplastic conditions during the life time of a woman. [5] It should be performed when the risk of preserving the uterus is greater than its removal or when the disabling symptoms for which there is no successful medical treatment.

The uterus, ovaries, fallopian tubes, vagina, and external and internal genitalia make up the complex yet fascinating female genital system. The uterus, sometimes referred to as the womb or cervix, is one of the most important female reproductive organs. Both non-neoplastic and neoplastic illnesses can affect them. The uterus's endometrium and myometrium, which are home to fetuses, are continuously stimulated by hormones and experience a monthly loss of endometrial mucosa. The most frequent reasons why patients consult gynecologists are endometrial and corpus of the uterus lesions, in addition to cervical lesions.

In spite of several therapeutic alternatives, including medicine and conservative surgical methods, hysterectomy continues to be the most frequently done gynecological operation worldwide. Charles Clay carried out the first partial hysterectomy in Manchester, England, in 1843, and the first whole abdominal hysterectomy in 1929. There have been reports of a number of illnesses, including fibroids, gynecological cancers, irregular uterine bleeding, pelvic discomfort, pelvic inflammatory disease (PID), and prolapse of the uterus, adenomyosis, endometriosis, and obstetric issues. Since histology is the sole source that leads to a definitive diagnosis, every hysterectomy sample needs to be analyzed histopathologically [6].

MATERIALS AND METHODS

Study Area: Department of Obstetrics and Gynaecology, Calcutta National Medical College and Hospital, Kolkata

Study Design: It is a prospective observational study

Study Period: 1 year

Inclusion criteria:

- Female patients who have undergone a hysterectomy procedure.
- Hysterectomy specimens submitted to the histopathology department for analysis.
- Patients aged 18 years and above.

- Availability of complete clinical and histopathological data.

Exclusion criteria:

- Specimens that is damaged, incomplete, or unsuitable for proper histopathological evaluation.
- Hysterectomies performed due to pregnancy-related complications are excluded.
- Patients with incomplete or missing medical records and clinical history are excluded from the study.

Sample Size: A total of 100 samples have been included in this study.

Statistical Analysis:

For statistical analysis, data were initially entered into a Microsoft Excel spreadsheet and then analyzed using SPSS (version 27.0; SPSS Inc., Chicago, IL, USA) and GraphPad Prism (version 5). Numerical variables were summarized using means and standard deviations, while categorical variables were described with counts and percentages. Chi-square tests (χ^2 tests) were employed to evaluate hypotheses where the sampling distribution of the test statistic follows a chi-squared distribution under the null hypothesis; Pearson's chi-squared test is often referred to simply as the chi-squared test. For comparisons of unpaired proportions, either the chi-square test or Fisher's exact test was used, depending on the context. To perform t-tests, the relevant formulae for test statistics, which either exactly follow or closely approximate a t-distribution under the null hypothesis, were applied, with specific degrees of freedom indicated for each test. P-values were determined from Student's t-distribution tables. A p-value ≤ 0.05 was considered statistically significant, leading to the rejection of the null hypothesis in favour of the alternative hypothesis.

RESULT

Table 1: Clinical indication and Histopathological diagnosis of hysterectomies

		No. of cases	%
Clinical	Fibroid	60	60



indication	Utero-vaginal prolapse	20	20
	Adenomyosis	5	5
	Abnormal uterine bleeding	8	8
	Endometrial polyp	6	6
	Abdominal mass	1	1
	Histopathological diagnosis	Proliferative phase	50
Senile endometrium		18	18
Secretory phase		15	15
Basal endometrium		8	8
Endometrial polyp		3	3
Chronic endometritis		2	2
Simple hyperplasia		2	2
Endometrial adenocarcinoma		2	2

Figure 1: Histopathological findings in myometrium

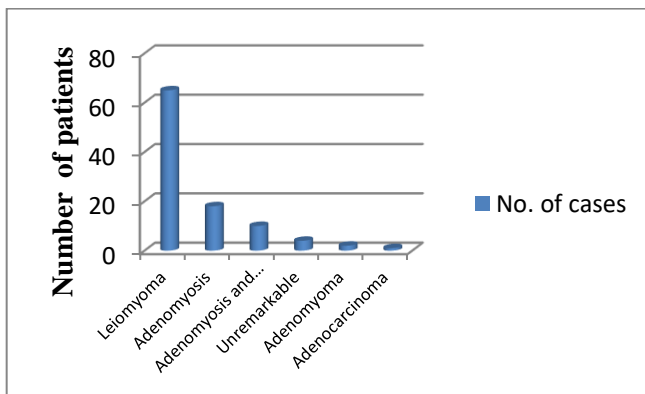
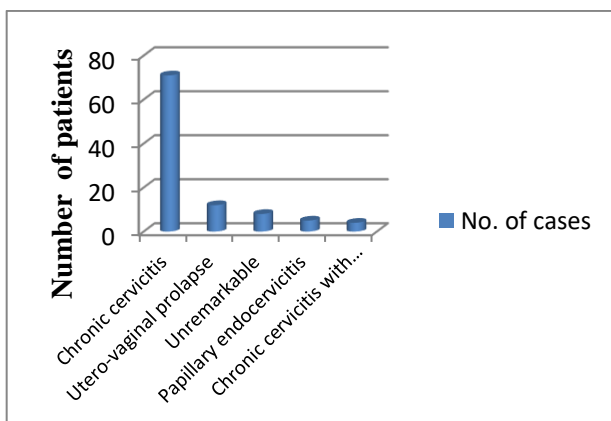


Figure 2: Histopathological findings in cervix



In our study, 60 (60%) patients had Fibroid, 20 (20%) patients had Utero-vaginal prolapse, 5 (5%) patients had

Adenomyosis, 8(8%) patients had Abnormal uterine bleeding 6 (6%) patients had endometrial polyp and 1 (1%) patient had abdominal mass. The value of z is 9.0614. The value of p is < .00001. The result is significant at p < .05. In our study, 50 (50%) patients had Proliferative phase, 18 (18%) patients had Senile endometrium, 15 (15%) patients had Secretory phase, 8 (8%) patients had Basal endometrium, 3 (3%) patients had Endometrial polyp, 2 (2%) patients had Chronic endometritis, 2 (2%) patients had Simple hyperplasia and 2 (2%) patients had Endometrial adenocarcinoma. The value of z is 7.7379. The value of p is < .00001. The result is significant at p < .05.

In our study, 65 (65%) patients had Leiomyoma, 18 (18%) patients had Adenomyosis, 10 (10%) patients had Adenomyosis and leiomyoma, 4 (4%) patients had Unremarkable, 2 (2%) patients had Adenomyoma and 1 (1%) patient had Adenocarcinoma. The value of z is 9.6243. The value of p is < .00001. The result is significant at p < .05. In our study, 71 (71%) patients had chronic cervicitis, 12 (12%) patients had Utero-vaginal prolapse, 8 (8%) patients had Unremarkable, 5 (5%) patients had papillary endocervicitis and 4 (4%) patients had chronic cervicitis with squamous metaplasia. The value of z is 9.786. The value of p is < .00001. The result is significant at p < .05.

DISCUSSION

Hysterectomy is the most commonly performed surgery in gynaecological practice as it provides definitive cure and accurate diagnosis. The clinical indications to perform this major surgery should always be justified as it has its own psychological, emotional, medical, hormonal and sexual effects on a female's life. So, here comes the role of histopathological analysis to evaluate the appositeness of the hysterectomy.

In this study, 100 hysterectomies were analysed histopathologically. We found that, majority of the patients had Fibroid indication [60 (60%)] and it was statistically significant (p< .00001), (z=9.0614) Similar observations were made by Ajmera et al, [7]

The most common age group was 41-50 years in the present study which was in concordance with Domblae et al, Patil et al and many others.[8]

We found that, significantly higher of patients had Proliferative phase diagnosis [50(50%)] and it was statistically significant (p< .00001), (z=7.7379)



Our study showed that, most of the patients had Leiomyoma [65 (65%)] which was statistically significant ($p < .00001$), ($z=9.6243$)

We found that, most number of patients had Chronic cervicitis [71 (71%)]. It was statistically significant ($p < .00001$), ($z=9.786$)

Ajmera et al and Archana et al have the similar findings, but Shakira et al and Sobande et al showed discordance with our study.[9,10]

The most frequent findings in our investigation were chronic cervicitis in the cervix, leiomyoma in the myometrium, and proliferative phase in the endometrium, which were similar to findings in earlier studies by Khunte et al.[11] Similar results were found by Verma et al in the endometrium and cervix, although in the myometrium, adenomyosis was more prevalent.[12]

CONCLUSION

In conclusion, the histopathological analysis of hysterectomy specimens in a tertiary care center provides invaluable insights into the spectrum of uterine, cervical, and adnexal pathologies that warrant surgical intervention. The significance of routine histological investigation in guaranteeing precise diagnosis is underscored by this study, especially in situations where clinical symptoms might not be entirely predictive of underlying disease. It is possible to improve patient treatment, therapeutic techniques, and results by having a better understanding of the different benign and malignant disorders that have been discovered. These results highlight the need for ongoing monitoring and careful inspection in tissue analysis following a hysterectomy in order to maximize women's health care.

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