



Original Article

Histopathological Analysis of Cervical and Uterine Pathologies in Hysterectomy specimens in tertiary care centre

Authors

Poonam Sharma^{1*}, Sonika Gupta²

¹Lecturer, Department of Pathology, Government Medical College, Jammu

²Consultant Gynaecologist, District Hospital Udampur, Jammu

*Corresponding Author

Poonam Sharma

Abstract

Background: *The uterus is a major female hormone-responsive reproductive organ located in the pelvis. The gross morphology of uterus quite dramatically changes throughout life by changing levels of ovarian hormones. A wide range of diseases, both benign and malignant, involve the uterus and need adequate evaluation on hysterectomy and histopathology.*

Aim/Objectives: *To identify the different pathological lesions involving the uterus, endometrium and cervix in the hysterectomy specimens.*

Material and Methods: *This retrospective study was performed in pathology department at tertiary care centre from January 2017 to June 2018. Total 1400 hysterectomy specimens were analyzed for histopathological lesions in uterus, endometrium and cervix.*

Results: *Majority of the patients were seen in 5th decade of life. Abnormal Uterine Bleeding was the commonest presenting complaint. Uterine Leiomyoma was the commonest myometrial lesion while chronic cervicitis was the commonest cervical lesion. Normal physiological endometrium was seen in majority of cases. Malignant lesions were seen in 2.1% cases and included squamous cell carcinoma of cervix (18 cases) and adenocarcinoma of endometrium (9 cases).*

Conclusions: *A wide range of lesions are encountered when hysterectomy specimens are subjected to histopathological examination. So it is imperative that every hysterectomy specimen should be subjected to detailed gross and histopathological examination for better postoperative management.*

Keywords: *Histopathology; Hysterectomy; Cervix; Malignancy.*

Introduction

Hysterectomy is the name given to the procedure involving the removal of uterus and it is the most common gynaecological surgery performed in the females worldwide. The uterus is a vital reproductive and hormone responsive organ and is subjected to many non-neoplastic and neoplastic conditions^[1]. Uterus includes the uterine corpus

and cervix and the uterine corpus consists of endometrium and myometrium. The uterine corpus is under hormonal influence and is denuded monthly of its endometrial mucosa^[2]. Pathologies of the uterus and cervix account for majority of patient visits to gynaecologists. Though a number of treatment modalities are available nowadays for various uterine

pathologies, hysterectomy still remains the most preferred method. It is considered as the definitive treatment for various benign pelvic pathologies like leiomyoma, dysfunctional uterine bleeding (DUB), chronic pelvic pain, endometriosis, adenomyosis, uterovaginal prolapse and in some cases of genital tract malignancies^[3].

Histopathological evaluation of the hysterectomy specimens is important for the diagnosis and to assess the pattern of common uterine and cervical lesions. Histopathological analysis of hysterectomy specimen has both diagnostic and therapeutic importance. So the purpose of this study was to study gross and histopathological patterns of various uterine and cervical lesions and their clinic-pathological correlation

Material and Methods

This retrospective study was conducted for a period of one and Half years (January 2017-June 2018) in post graduate department of pathology, GMC, Jammu, which is tertiary care centre in North India. All hysterectomy specimens with uterine and cervical indications for hysterectomy irrespective of route and type of surgery were included in the study. Hysterectomy specimens with indications of tubal or ovarian pathology were excluded from the study. Clinical details and relevant history of the patients were obtained from the requisition forms. Hysterectomy specimens received were immediately transferred into 10% fresh formalin and after fixation, the specimen was examined grossly and necessary sections were obtained from uterus that includes endometrium, myometrium, ectocervix and endocervix. Additional bits were taken depending on the pathology present. Paraffin sections and slides from the blocks were stained with H & E. The slides were then reviewed microscopically in detail and results obtained. The histopathological findings of uterus and cervix were then noted and these findings were then correlated with clinical diagnosis.

Results

1400 patients formed the material of the study. Majority of the patients were seen in 5th decade of life followed by 4th decade with age range of 26-68 years. The most common type of hysterectomy was total abdominal hysterectomy (880 cases) followed by vaginal hysterectomy (520 cases). The commonest clinical indication of hysterectomy was abnormal Uterine bleeding followed by Leiomyoma and Utero-vaginal prolapse. Vaginal hysterectomy was mainly done for Utero-vaginal prolapse.

Endometrial Pathology was seen in 373 cases while endometrium was unremarkable in 1027 cases (Table 1). The commonest endometrial pathology was atrophic endometrium seen in 138 (9.9%) cases. It was followed by simple endometrial hyperplasia (88 cases) and endometrial polyp (47 cases). Complex hyperplasia without atypia and complex hyperplasia with atypia were seen in 8 and 6 cases respectively. Malignant endometrial lesions were seen in 11 cases comprising of 9 cases of endometrial carcinoma and 2 cases of endometrial stromal sarcoma.

Myometrial pathology was seen in 636 cases (45.4%) while normal myometrium was seen in 764 cases (54.6%) (Table 1). Leiomyoma was the most common histopathological lesion (464 cases) followed by Adenomyosis (98 cases) and Adenomyosis with Leiomyoma (64 cases). Four cases of Adenoleiomyoma and single case of Leiomyosarcoma were also seen.

Among cervical lesions, Chronic Cervicitis (1006 cases) was the commonest histopathological finding followed by Utero-vaginal prolapse (266 cases) (Table 1). Normal cervix was seen in 50 cases, Endocervical polyp in 40 cases and chronic papillary endocervicitis in 10 cases. Low Grade Squamous intraepithelial lesion (LSIL) was seen in 8 cases while High Grade Squamous intraepithelial lesion (HSIL) in 2 cases. 18 cases of carcinoma cervix were seen and all were squamous cell carcinomas.

Table 1: Histopathological Spectrum of Ovarian Tumours (n=1400)

Histopathology		No	%
Myometrial Lesions	1. Leiomyoma	464	33.1
	2. Adenomyosis	98	7.0
	3. Adenomyosis and Leiomyoma	68	4.9
	4. Adenoleiomyoma	4	0.29
	5. Leiomyosarcoma	1	0.07
	6. Unremarkable	764	54.6
Endometrial Lesions	1. Normal Endometrium	1027	73.1
	2. Simple Hyperplasia	88	6.3
	3. Atrophic endometrium	138	9.9
	4. Endometrial polyp	47	3.3
	5. Products of conception	29	2.1
	6. Pill Endometrium	24	1.7
	7. Chronic Endometritis	12	0.8
	8. Disordered Proliferative Endometrium	10	0.7
	9. Endometrial Carcinoma	9	0.8
	10. Complex Hyperplasia without Atypia	8	0.6
	11. Complex Hyperplasia with Atypia	6	0.4
	12. Endometrial Stromal Sarcoma	2	0.1
Cervical Lesions	1. Chronic Cervicitis	1006	71.8
	2. Utero-vaginal Prolapse	266	19.0
	3. Cervical Polyp	40	2.9
	4. Chronic Papillary Endocervicitis	10	0.7
	5. LSIL	8	0.5
	6. HSIL	2	0.1
	7. Carcinoma Cervix	18	1.3
	8. Unremarkable	50	3.6

Discussion

Hysterectomy is the most commonly performed major gynaecological surgery worldwide and its prevalence varies from country to country and region to region^[4]. Hysterectomy has become the definitive treatment for pelvic pathology including fibroids, abnormal uterine bleeding, chronic pelvic pain, endometriosis, adenomyosis, uterovaginal prolapse, pelvic inflammatory diseases and cancer of reproductive organ^[5].

Total of 1400 cases were studied over a period of one and a half years. The hysterectomies were distributed over a wide age range of 20 years to 70 years. The most common age group undergoing hysterectomy was 41-50 years (50.8%) followed by 31-40 years age group (22.8%). Similar results were also seen in previous studies^[6,7,8]. Commonest clinical complaint in our study was abnormal uterine bleeding similar to results of Sreedhar VV et al^[5] and Arzoo Amin et al^[9].

Out of 600 cases, endometrial pathology was seen in 26.6% cases while histologically normal endometrium was seen in rest of the cases. The commonest endometrial pathology was atrophic

endometrium (138 cases) and simple endometrial hyperplasia (88 cases) followed by endometrial polyp (47 cases) and products of conception (29 cases). Pill endometrium (24 cases), Chronic endometritis (12 cases) and Disordered Proliferative Endometrium (10 cases) were the other benign pathologies seen. Results in our studies were similar to previously published studies^[9,10]. Complex hyperplasia without atypia and complex hyperplasia with atypia were seen in 0.6% and 0.4% cases respectively in our study, similar to previous studies^[8,11]. Malignant lesions were seen in 11 (0.8%) cases in our study, Endometrial carcinoma in 9 cases and endometrial stromal sarcoma in 2 cases. The results were comparable to studies of Patel AS et al^[1] and Thaker BD et al^[11] but higher than results of study by Rather GR et al^[8].

Myometrial pathology was seen in 45.4% cases in our study. Leiomyoma was the commonest histopathological lesion found in myometrium (33.1%). Comparable distribution was also seen in studies by Thaker BD et al^[11] and Ranabhat SK et al^[12] and Rather GR et al^[8]. Adenomyosis (7%)

was the second commonest myometrial pathology in our study followed by Adenomyosis with leiomyoma. Comparable results were seen in previous studies^[8,13]. Adenomyosis is quite difficult to diagnose preoperatively as it has no specific symptoms^[13] and is mostly diagnosed after hysterectomy on histopathological examination. Single case of leiomyosarcoma was also seen in our study similar to previous studies^[8,11,13].

Chronic cervicitis was the commonest cervical pathology in our study seen in 71.8% cases, similar to previously published studies^[8,13]. Chronic cervicitis is an extremely common condition in adult females and diagnosed on microscopy^[11]. It was followed by Utero-vaginal prolapse (19.0%) and Endocervical polyp (2.9%). In our study, LSIL was seen in 8 cases while HSIL was seen in 2 cases. 18 cases of carcinoma cervix were seen and all were squamous cell carcinomas.

Conclusions

The study provides an insight into the wide range of histopathological patterns of lesions in uterus and cervix in hysterectomy specimens. Leiomyoma and Adenomyosis were the commonest uterine pathology while chronic cervicitis was the most common pathology in cervix in hysterectomy specimens. Microscopic assessment and clinico-pathological correlation is necessary as grossly identifiable benign lesion may harbour in focus of malignancy. So it is imperative that every hysterectomy specimen should be subjected to detailed gross and histopathological examination for better postoperative management.

Conflicts of Interest: Nil

Source of Funding: Nil

Acknowledgements: Nil

References

1. Patel A. S, Shah K. J. Histo pathological analysis of hysterectomy specimens in

tertiary care center: two year study. Trop J Path Micro 2018;4(1):34-39.

2. Jandial R, Choudhary M, Singh K. Histopathological analysis of hysterectomy specimens in a tertiary care centre: study of 160 cases. Int Surg J. 2019 Aug; 6(8):2856-2859.
3. Nausheen F, Iqbal J, Bhatti FA, Khan AT, Sheikh S. Hysterectomy: The patient's perspective. Annals Gynecol. 2004 Oct-Dec;10(4):339-41.
4. Singh A, Arora AK. Why hysterectomy Rate are lower in India. Indian J Community Med. 2008 Jul; 33(3): 196–197.
5. Sreedhar VV, Jyothi V, Sailaja V, Charan Paul MNP, Sireesha O, Vani et al. Histopathological Spectrum of Lesions of Hysterectomy Specimens – A Study of 200 Cases. Saudi J. Pathol. Microbiol. 2016 Jul-Sep;1(2):54-59.
6. Ramchandaran T, Sinha P, Subramaniam. Correlation between clinicopathological and ultrasonographical findings in hysterectomy. J Clin Diag Res. 2011 Aug;5(4):737-740.
7. Ajmera SK, Mettler L, Jonat W. Operative spectrum of hysterectomy in a German university hospital. J Obs Gynecol India. 2006 Jan/Feb;56(1):59-63.
8. Rather GR, Gupta Y, Bardhwaj S. Patterns of Lesions in Hysterectomy Specimens: A prospective study. JK Sci. 2013 Apr-Jun;15(2):63-68.
9. Amin A, Ali A, Amin Z, Sani FN. Justification for hysterectomies and frequency of histopathological lesions of hysterectomy at a Teaching Hospital in Peshawar. Pak J Med Sci. 2013 Jan-Mar; 29(1): 170–172.
10. Baral R, Sherpa P, Gautam D. Histopathological analysis of hysterectomy specimens-One year study. J Pathol Nepal. 2017;7:1084-1086.

11. Thaker BD, Hans D. Histopathological Analysis of Uterine and Cervical lesions in Hysterectomy specimens in GMC Jammu A one year Study. Int J Sci Res. 2017 Oct;6(10):22-23.
12. Ranabhat SK, Shrestha R, Tiwari M, Sinha DP, Subedee LR. A retrospective histopathological study of Hysterectomy with or without salpingo-ophorectomy specimens. JCMC. 2010;1(1):26-29.
13. Patil HA, Suresh AP, Mahajan P. Histopathological Findings in Uterus and Cervix of Hysterectomy Specimens. MVP J Med Sci. 2015 Jan-Jun;2(1):26-29.