A Histopathological Audit of Hysterectomy: Experience at A Tertiary Care Teaching Hospital

Pranita Medhi[1], Swagata Dowerah[2], Dhrubajyoti Borgohain[3]

ABSTRACT

Introduction: Rates of hysterectomy vary according to geographic distribution, patient expectations and training and practice patterns of the local gynaecologic surgeons. We present a retrospective study where one year data of all hystectomy cases sent for histopathology were analysed to find out the causes for which these surgeries were performed and also the spectrum of histopathological changes encountered in these specimen.

Material and methods: A descriptive study was conducted for the period of one year in the Pathology Department of Assam Medical College and hospital. All cases of hysterectomy sent to the pathology department were included in the study. The clinical history of all cases were collected from records and slides stained with hematoxylin and eosin were re examined. Pathological findings in the uterus, cervix, ovaries and tubes were noted.

Results: Of the 150 cases studied, the most common age group undergoing hysterectomy appeared to be 40-49 yrs (74cases) followed by 30-39 years (39 cases). Mean age was found to be 40.26 years.Most common findings in the uterus included leiomyoma (39 cases), and adenomyosis (39 cases). Chronic cervicitis was the most common finding in cervix. In the ovaries, benign cystic lesions included follicular cyst (42 cases), luteal cyst (27 cases), hemorrhagic cyst (where the lining could not be delineated) in 5 cases, benign cystic teratoma (5 cases). There were 6 patients with serous cystadenoma, 1 borderline serous tumor and 5 cases of papillary serous cystadenocarcinoma, 1 case of mucinous cystadenoma, 3 cases of mucinous cystadenocarcinoma and a single case of Krukenbergtumor.

Conclusion: The most common indication for hysterectomy in our setting is excessive uterine bleeding. Fibroid uterus was the most common pathology for which hysterectomy was performed. Chronic cervicitis was the most common incidental finding. Adenomyosis remained the most common problem which was missed preoperatively.

Keywords: hysterectomy, histopathology

INTRODUCTION

Hysterectomy, which means surgical removal of the uterus is the second most frequently performed major surgical procedure in females worldwide next to cesarean section.[1] Indications of hysterectomy vary from benign condition to malignancies of genital tract. Since early twentieth century it is considered definite treatment of various pelvic pathologies like leiomyoma, dysfunctional uterine bleeding (DUB), chronic pelvic pain, endometriosis, adenomyosis, prolapse, and malignancies.[2] Rates of hysterectomy vary with geographic area, patient expectations and training and practice patterns of the local gynaecologic surgeons. However, like any other surgery, hysterectomy is also associated with intraoperative and postoperative complications. It has led to a lot of debate owing to physical, emotional, economic, sexual, and medical significance to women.[3] We present a retrospective study where one year data of all hystectomy cases sent for histopathology were analysed to find out the causes for which these surgeries were performed and also the spectrum of histopathological changes encountered in these specimen.

MATERIAL AND METHODS

A descriptive study was conducted for the period of one year in the Pathology Department of Assam Medical College and hospital. All cases of hysterectomy sent to the pathology department of Assam Medical College and hospital were included in the study. Study period was1 year and sample size was 150. All elective as well as emergency hysterectomies (including obstetric hysterectomies) were analysed and included in the study sample excluding oncological hysterectomies.The clinical history of all cases during this period were collected from records and slides stained with hematoxylin and eosin were re examined. Pathological findings in the uterus, cervix, ovaries and tubes were noted.At the end main postoperative histopathology diagnosis was recorded. Preoperative indication was compared with pathologist's report after surgery.

STATISTICAL ANALYSIS

SPSS version 21 was used to generate tables. Only descriptive statistics were used to infer results.

RESULTS

Of the 150 cases studied, the most common age group undergoing hysterectomy appeared to be 40-49 yrs (74 cases) followed by 30-39 years (39cases). Mean age was found to be 40.26 years. Hysterectomy below 20 years and above 70 years was rare (1 case each). The most common complaint was uterine bleeding, followed by abdominal distension and mass.

Histopathological findings in the uterus included leiomyoma (39 cases) [Fig 1], adenomyosis (39 cases) [Fig 2], atrophic endometrium was seen in 34 cases of which 4 cases showed

[1]Associate Professor, [2]Demonstrator, Department of Pathology, [3]Assistant Professor, Department of Anaesthesiology, Assam Medical College, Dibrugarh, Assam, India

Corresponding author: Dr. Pranita Medhi, Associate Professor, Department of Pathology, Assam Medical College and Hospital, Dibrugarh, India

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cystic atrophy of endometrial glands, endometrial hyperplasia (29 cases), endometrial polyp (6 cases) and endometritis (1 case). Of the cases showing endometrial hyperplasia, 3 cases of complex hyperplasia and 26 cases showing simple hyperplasia were noted. 2 of these showed atypia, 2 showed cystic hyperplasia.

Among cervical lesions, 120 cases showed features of chronic cervicitis. Cervical adenosis was seen in 9 cases, polyp in 5 cases, squamous metaplasia of endocervical glands was seen in 7 cases, cervical dysplasia in 5 cases, squamous cell carcinoma and cervical fibroid in 1 case each.

On examination of the ovaries, benign cystic lesions included follicular cyst (42 cases), luteal cyst (27 cases), hemorrhagic cyst (where the lining could not be delineated) in 5 cases, benign cystic teratoma (5 cases) [Fig 3]. There were 6 patients with serous cystadenoma, 1 borderline serous tumor and 5 cases of papillary serous cystadenocarcinoma (of which 4 cases were in right ovary and 1 case was bilateral) [Fig 4]. We observed 1 case of mucinous cystadenoma, 3 cases of mucinous cystadenocarcinoma (2 in right ovary, 1 in left) and a single case of Krukenbergtumor.

Fallopian tube pathology included chronic salpingitis (14 cases), hydrosalpinx (3 cases), dysplasia (1 case), tubercular granuloma (1 case) and ectopic pregnancy (1 case).

Ratio of benign to malignant lesions in total hysterectomy specimen were 14:1. Most of the malignancies were in the ovary. Right ovary was more commonly involved by malignant disease as compared to the left. Although endometrial carcinoma is quite common in endometrial biopsies, no case of endometrial carcinoma was recorded in the hysterectomy specimen.

DISCUSSION

It is observedthat more than 90% of gynaecological surgeries are performed for benign conditions with the major objective of improving the patient's quality of life.[4] In our study, a total of 150 hysterectomies were performed over a period of 1 year. Most of these were for benign causes (93.3%) and 6.6% only were for malignant cause. Uterine fibroid was the most common indication in our cases, which correlates with the findings in several other studies. Most common incidental finding was chronic cervicitis.Cervical dysplasia was seen in 5 cases and a single case of squamous cell carcinoma was reported in our study.

Uterine leiomyoma and adenomyosis were the two most common pathological findings after chronic cervicitis. A similar pattern has been reported in various other studies.[5-7]

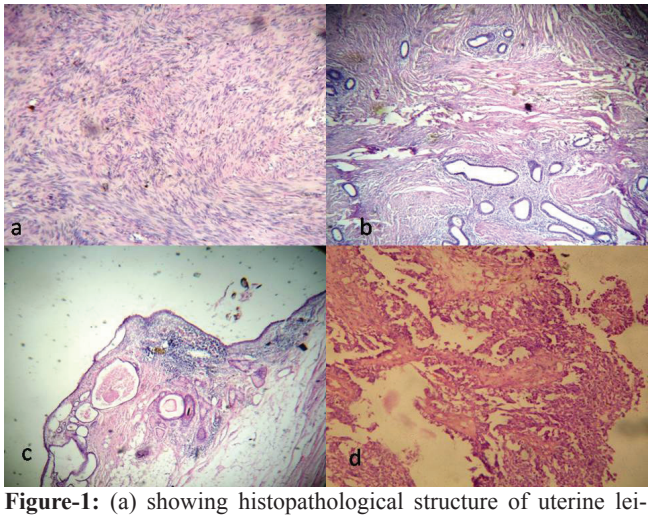

Figure-1: (a) showing histopathological structure of uterine leiomyoma (40X); (b) showing endometrial glands deep inside the myometrium- adenomyosis (10X); (c) showing microscopic picture of benign cystic teratoma (10X); (d) showing picture of serous cystadenocarcinoma (10X)

Age group(in years)	Total no. of cases	Percentage
10-19	1	0.66%
20-29	9	6%
30-39	39	26%
40-49	74	49.33%
50-59	14	9.33%
60-69	12	8%
70-79	1	0.66%

Table 1: Age wise distribution of cases

Histopathological Finding	Total cases	Percentage
Leiomyoma	39	26%
Adenomyosis	39	26%
Atrophic endometrium	34 (4 cases – cystic atrophy)	22.7%
Endometrial hyperplasia	29	19.3%
Endometrial polyp	6	4%
Endometritis	1	0.7%

Table-2: Histopathological findings in uterus

Histopathological Finding	Total cases	Percentage
Cervical adenosis	9	6%
Squamous metaplasia of endocervical glands	7	4.7%
Cervical polyp	5	3.3%
Cervical dysplasia	5	3.3%
Squamous cell carcinoma	1	0.7%
Cervical fibroid	1	0.7%

Table-3: Histopathological findings in cervix

Histopathological Finding	Total cases	Percentage
Follicular cyst	42	28%
Luteal cyst	27	18%
Serous cystadenoma	6	4%
Serous cystadenocarcinoma	5	3.3%
Benign cystic teratoma	5	3.3%
Mucinous cystadenocarcinoma	3	2%
Mucinous cystadenoma	1	0.7%
Borderline serous	1	0.7%
Krukenbergtumor	1	0.7%

Table-4: Histopathological findings in ovaries

Histopathological Finding	Total cases	Percentage
Chronic salpingitis	14	9.3%
Hydrosalpinx	3	2%
Dysplasia	1	0.7%
Ectopic pregnancy	1	0.7%
TB granuloma	1	0.7%

Table-5: Histopathological findings in fallopian tubes

More than 50% of women presenting with menorrhagia are seen to have fibroid during their reproductive life. Several studies have reported uterine fibroid as the most frequent pathological lesion with the frequencies ranging from 25-48% in local studies.[5,8-10]

Excessive menstrual bleeding was the main indication for hysterectomy. Adenomyosis was the most common finding missed preoperatively. This agrees with the findings of Tiwani et al.[11] and Siwatch et al.[12] Higher degree of suspicion and better technique may help in diagnosing the missed indications. The mention of all findings on histopathologyrequest forms is important to correlate the pre and postoperative findings and justify the decision for hysterectomy.

Ovarian tumors were observed in 11.3% of the hysterectomy cases. Most common were serous cystadenomas followed by serous cystadenocarcinoma. Mucinous tumors were less common in our study. In the study by Siwatch et al. serous and mucinous cystadenomas were seen in equal frequency. Benign ovarian tumors in our study wereslightly more common (12 cases) than malignant tumors (9 cases) with one case in borderline category.

Fallopian tube pathology in our study included chronic salpingitis, hydrosalpinx, dysplasia, tubercular granuloma and ectopic pregnancy.

Mean age of patients undergoing hysterectomy was 42.6 years. Sirpurkar et al reported a mean age of 46 years[13] Peak age group in our study was 40-49 years, followed by 30-39 years. Several other studies also have shown that majority of hysterectomies occur in the fifth decade.[5,6,14]

Majority of pre operative diagnosis were confirmed on hysterectomy. Those missed were mainly patients with dysfunctional uterine bleeding where histopathology revealed adenomyosis, small leiomyomas and endometrial hyperplasia.

CONCLUSION

The most common indication for hysterectomy in our setting is excessive uterine bleeding. Fibroid uterus was the most common pathology for which hysterectomy was performed. Chronic cervicitis was the most common incidental finding. Adenomyosis remained the most common problem which was missed preoperatively and diagnosed on histopathological examination. Analyzing the indications for hysterectomy with the pathologic/surgical findings can help recognize malpractice and lacunae in the knowledge or training of health care service providers or non availability of newer alternatives for hysterectomy.We want to stress on fact that uterus should not be considered for child bearing purposes only, as after hysterectomy females suffer from various psychosexual dysfunctions and the operation should be performed only in presence of proper indications and in the non availability of other treatment options.

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