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Original article

Histopathological spectrum of hysterectomy specimen in a tertiary care hospital from Kashmir valley

Bushra Rashid Sahaf[1*], Annu Charak[2], Irfan Ahmed3, Rehana Qadir4, Abdul Rashid Rather[5]

[1]Lecturer, [2&4]Senior Resident, [5]Prof & Head, Department of Pathology, [3]Senior Resident,Department of Medicine, Sher -i- Kashmir Institute of Medical Sciences Medical College and Hospital, Bemina ,Srinagar , J&K, India.

ABSTRACT

Background: Hysterectomy is considered to be the most definitive treatment option for various diseases which cause abnormal uterine bleeding and uterine malignancies which include cervical as well as endometrial. It is also the treatment for prolapse uterus and forms part of the completion surgery in case of ovarian malignancies. The aim of our study was to determine the spectrum of pathologies in the hysterectomy specimens and its correlation of preoperative diagnosis with histopathological diagnosis. **Methods:**This was a retrospective study conducted in the department of Pathology SKIMS MCH Bemina, Srinagar over a period of one year. It includes all hysterectomy specimen, elective as well as emergency.**Results:**The cases were broadly categorised according to the preoperative clinical indications of hysterectomy into six major groups as Uterine pathology(63.8%) , Procidentia& Repair(17.46%) , Ovarian pathology(7.93%). Other common indications were obstetric causes (4.76%), cervical pathology (2.38%) and miscellaneous causes(3.57%). Leiomyoma(49.06%) was the most common histopathological diagnosis.**Conclusion**: In our study 161 cases who presented with abnormal uterine bleeding, the organic pathology was noted in 75.7% cases while 24.2% cases did not show any definitive pathology.

KEYWORDS: Hysterectomy, Leiomyoma, Adenomyosis, Prolapse, Adnexal lesion, Caesarean hysterectomy.

INTRODUCTION

Hysterectomy means removal of the uterus. It is one of the most common gynaecological surgeries in the world. Hysterectomy is considered to be the most definitive treatment option for various diseases like Dysfunctional Uterine Bleeding (DUB), leiomyoma, adenomyosis, malignancy, chronic pelvic pain &prolapse uterus [1, 2]. Approximately 600,000 hysterectomies are performed every year in the United States & in United Kingdom 20% of women undergo hysterectomy before the age of sixty years [3].As there is consistent demand for hysterectomy, this procedure has been identified as a key health indicator in recent reports which can be used to measure & compare the performance of any hospital [4].

Ovarian cancer is the second leading cause of mortality among all gynaecological cancers [5]. As the clinical presentation of benign & malignant lesions of ovary is similar, there is confusion in the diagnosis, although it is diagnosed as a mass or cystic leision on ultrasonography & hence removed prophylactically in routine hysterectomies [6].The aim of our study was to determine the spectrum of pathologies in the hysterectomy specimens and its correlation of preoperative diagnosis with histopathological diagnosis.

MATERIALS AND METHODS

The retrospective study was conducted in the department of Pathology SKIMS MCH Bemina, Srinagar over a period of one year from January 2017 to December 2017. It includes all the hysterectomy specimen, elective as well as emergency, received in the department for benign as well as malignant pathology. There were a total of 252 hysterectomy specimens. Preoperative clinical indications of hysterectomies were recorded from the requisition form. Specimens were fixed in 10% neutral buffered formalin for about 24 hours. The specimen was examined grossly & appropriate sections were taken. The tissue pieces were then processed in automated tissue processor.

Paraffin blocks were made and sections were cut with the microtome at 3-4 micron thickness and stained by H&E stain. Hysterectomy was justified if the histopathology

showed definitive pathology or organic lesion in the specimen received. The confidentiality of patient's identity was maintained. Descriptive statistics was used for describing the data using SPSS version 20 and results were presented in percentage and simple frequency.

RESULTS

A total of 252 hysterectomy specimens received in the department over a period of one year were included in the study. Out of these, 217(86.1%) were abdominal hysterectomy and 35(13.8%) were vaginal hysterectomy.The cases were broadly categorised according to the clinical indications of hysterectomy into six major groups as shown in Table 1. Majority of patients presented with Uterine pathology(63.8%) followed by Procidentia& Repair(17.46%) and Ovarian pathology(7.93%).

Table 1: Case Distribution Based on Preoperative Clinical Indications of Hysterectomy

Clinical indication of hysterectomy	Number Of cases	Percentage
Cesarean hysterectomy	12	4.76%
Adnexal pathology	20	7.93%
Uterine pathology	161	63.8%
Procidentia& Repair	44	17.46%
Cervical pathology		2.38%
Miscellaneous causes	09	3.57%
Total	252	100%

Among the groups of patients of primary uterine pathology, abnormal uterine bleeding was the presenting symptom. The commonest cause of abnormal uterine bleeding observed in our study was Leiomyoma(49.06%) followed next by Adenomyosis(12.4%) and Endometrial polyp(9.31%). About 4.34% cases of Non atypical endometrial hyperplasia and 4.96% cases of Atrophic endometrium were observed. Also seen in our study were 2.48% cases of Pill endometrium and 1.24% cases of Endometrial carcinoma. About 0.62% cases each of Adenomatoid tumour of uterus and Endometrial Intraepithelial Neoplasia(EIN) within the endometrial polyp were also noted in the study.Table 2 shows various histopathological diagnosis in patients presenting with primary uterine pathology.

Table 2:Histopathological Diagnosis in Hysterectomies Due To Uterine Pathology

Histopathological diagnosis in uterine lesions	Number Of cases	Percentage
Leiomyoma	64	39.7%
Adenomyosis	14	8.69%
Leiomyoma+adenomyosis	06	3.72%
Endometrial polyp	11	6.83%
Endometrial polyp+Leiomyoma	04	2.48%
Proliferative endometrium	18	11.18%
Secretory endometrium	14	8.69%
Disordered proliferative endometrium	07	4.34%
Atrophic endometrium	08	4.96%
Non atypical Endometrial hyperplasia	04	2.48%
Endometrial carcinoma	02	1.24%
Adenomatoidtumour of uterus	01	0.62%
EIN within endometrial polyp	01	0.62%
Non atypical Endometrial hyperplasia+Leiomyoma	03	1.86%
Pill endometrium	02	1.24%
Pill endometrium+Leiomyoma	02	1.24%

There were total of 12 cases(4.76%) of cesarean hysterectomy, which included 7 (58.3%) placenta acreata, 3(25%) placenta increta and 2 (16.6%) cases in which hysterectomy was done for intractable Postpartum hemorrhage(PPH).About 7.93% of hysterectomies received had primary adnexal pathology. Majority of patients showed histopathologic diagnosis of Serous cystadenoma of ovary (45%) followed by mucinous cystadenoma(30%). About 1 case(5%) each of mature cystic teratoma, fibrothecoma, fibroma and bilateral endometriotic cysts were observed. In addition, one case (5%) of bilateral hydrosalpinx was also noted.

In Procidentia& Repair category, 38 cases of procidentia and 6 cases of repair were seen.Among Miscellaneous category, the predominant presenting symptom was pain abdomen and chronic PID.About 33.3% of such patients showed histopathological diagnosis of Leiomyoma and 11.1% cases each of Adenomyosis and Serous cystadenoma of ovary.

Cervical pathology was the indication of hysterectomy in 2.38% of all cases. Squamous cell carcinoma of cervix was seen in 2 patients(33.3%) and endocervical polyp in 4 patients(66.6%).In the category of primary uterine pathology, majority of hysterectomies were received in the age group of 40-49 years(44.09%) followed by age group of 50-59 years(23.60%) and 30-39 years(22.3%).

Among patients of uterine prolapse, majority were in the age group of >60 years(40.90%). About 27.2% cases were observed in 50-59 years and 13.63% cases in 40-49 year age group. All 6 cases of repair were performed in 40-49 year age group.Majority of Hysterectomies performed for ovarian pathology were in the age group of >60 years (35%). The two cases of SCC Cervix in our study were noted in 50-59 years age group.

Emergency hysterectomies due to obstetric causes were mostly noted in the 30-39 year age group(66.6%).The age related distribution of different categories of patients of hysterectomies are tabulated in Table 3.

Table 3: Age Related Distribution of Different Categories of Hysterectomies

Age groups(in years)	Cesaerean hysterectomy	Adnexal pathology	Uterine pathology	Procidentia& Repair	Cervical pathology	Miscellaneous causes
20-29	03(25%)	00	00	00	00	00
30-39	08(66.6%)	04(20%)	36(22.3%)	02(4.5%)	02(33.3%)	03(33.3%)
40-49	01(8.3%)	06(30%)	71(44%)	12(27.2%)	01(16.6%)	06(66.6%)
50-59	00	03(15%)	38(23.6%)	12(27.2%)	03(50%)	00
>60	00	07(35%)	16(9.9%)	18(40.9%)	00	00

DISCUSSION

Hysterectomy is the most commonly performed surgery in the gynaecological practice. A total of 252 hysterectomies were received in the department over a period of one year. Uterine Leiomyoma(49.06%) was the most common histopathological diagnosis in our study. These findings were similar to studies conducted by Chandralekha J et al [7], Jha et al[8], Bhat S et al [9], Tiwana KK et al [10] which showed 59.20%, 38.49%, 47.37%, 43.7% cases of Leiomyoma respectively. In our study, 12.4% cases comprise of Adenomyosis which is in accordance to study by Baral R et al [11] (10.3%) and SujataSiwatch et al [12] (18.9%). Endometrial polyp and Endometrial hyperplasia were noted in 9.3% and 4.34% of cases in our study. Similar findings were reported in a study by Bhat S et al [9]. However, Proliferative and Secretory Endometrium were noted in 11.1% and 8.69% cases of our study. Endometrial Carcinoma constitutes 1.24% of cases in our study. Similarly, study by HarshalA.Patil et al [13] showed 1.3% cases of same. In our study we reported a single case each of Adenomatoid tumour of uterus and EIN within endometrial polyp(0.62%each).

Caesarean hysterectomy constitutes 4.76% of cases and the major cause observed was placenta accrete (58.3%) followed by placenta increta(25%) and PPH(16.6%). Bhat S et al [9] and Tiwana KK et al [10] noted 5.64% and 3.2% of hysterectomies due to obstetric causes respectively. However study by Jaya Chawla et al [15] showed atonic PPH as the most common indication for Emergency obstetric hysterectomy(EOH).

The hysterectomy was done in 7.93% cases of ovarian pathology as completion surgery. The commonest ovarian lesion noted was serous cystadenoma(45%) followed by mucinous cystadenoma(30%). Similar findings were reported in study by SujataSiwatch et al [12]and DeeptiVerma et al [14].Uterine Prolapse was the indication for hysterectomy in 17.46% of our cases and majority of patients were in the age group of >60 years(40.90%). These findings were in accordance to study by SujataSiwatch et al [12].

The most common age group who underwent hysterectomy for primary uterine pathology was the perimenopausal age group,40-49 years(44.09%) which is similar to that reported by Chandralekha J et al [7].

CONCLUSION

Histopathological analysis provides a correlation of clinical and preoperative diagnosis and helps in appropriate management in postoperative period. Justification of hysterectomy is also proved when the histopathological diagnosis corresponds with preoperative diagnosis. This helps to reduce inappropriate indication for hysterectomy.In our study of 252 cases about 161 cases who presented with abnormal uterine bleeding, the organic pathology was noted in 75.7% cases while 24.2% cases did not show any definitive pathology. The commonest lesion noted was Leiomyoma followed by adenomyosis. Hysterectomy was justified in patients with uterine prolapse as well as in those presenting with either placental implantation disorder or post-partumhemorrhage. However, in case of adnexal pathology hysterectomy was done as part of completion surgery.

Competing interest: The authors declare that they have no competing interests.

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*Corresponding author: DrBushra Rashid Sahaf
E-Mail:Bushra.sahaf@gmail.com