

## ORIGINAL ARTICLE

**An Audit of Indications, Complications, Correlation of Preoperative Diagnosis with the Histopathology Report of Hysterectomies at Shalamar Hospital Lahore**BINYAMIN BUTT<sup>1</sup>, MAHWISH SAIF<sup>2</sup>, SADIA MUSTAFA<sup>3</sup>, MARYAM KHALID<sup>4</sup><sup>1</sup>PGR, GYN & OBS Shalamar Hospital Lahore<sup>2,3,4</sup>Senior Registrar, GYN & OBS Shalamar Hospital LahoreCorrespondence author: Binyamin Butt, Email: [binyaminbutt.bb@gmail.com](mailto:binyaminbutt.bb@gmail.com)**ABSTRACT****Introduction:** Hysterectomy is the most common gynecological procedure. Abdominal approach is preferred for an enlarged uterus especially in cases of fibroids. However, in a small sized uterus, use of vaginal route is supported in well selected cases**Objective:** Aim of this audit was to analyze indications, complications, and correlation of preoperative diagnosis with the histopathology report for all hysterectomies, performed in a Shalamar Hospital Lahore.**Methods:** This study was cross sectional and population the obs. And Gyn. Patients of Shalamar Hospital Lahore. This study is a three year retrospective review of 755 cases of hysterectomy either for gynecological or obstetric reasons managed at Shalamar Hospital Lahore from January 2019 to December 2021.**Results:** Abdominal hysterectomy accounted for 94%, while vaginal hysterectomy accounted for the remaining 6%. In the former category, an 86% had total abdominal hysterectomy while 9% had subtotal hysterectomy. The average duration of hospital stay following surgery was 3-5 days. The average indoor stay was 2-3 days after vaginal hysterectomy and 4-5days after abdominal hysterectomy. There were 4 cases of mortality accounting for a mortality rate of 1.8 %. Post operative morbidity was encountered in 29.4% of the patients. Anaemia was observed in 45.9%, post operative wound infection in 30.1%, pyrexia in 9% patients, chest infection in 6.7%, bladder injury in 3.6%, bowel injury in 1.8% of the patients.**Practical Implication:** The practical implication of this study is to correctly treat the patients with pre-operative investigation, Complications, and Correlation of Preoperative Diagnosis with the Histopathology Report of Hysterectomies in private hospitals.**Conclusions:** Hysterectomy is a major gynaecological procedure. Selection of a appropriate route is very important for the safety of the patient and for hospital stay. Like any other surgery, hysterectomy has an inherent set of complications. So clinical selection should be well justified. Like in any major gynecological procedure, a skilled operator can reduce the morbidity and mortality rates. The conservative approaches should be offered before opting for hysterectomy.**Keywords:** Pre-operative investigation, Hysterectomies, complications, private hospital, Obs and Gyn patients**INTRODUCTION**

Hysterectomy is a major surgical procedure in gynaecology which involves the removal of the uterus. The procedure can be performed under general or regional anesthesia followed by a post operative stay for a few days. Hysterectomy can be performed by abdominal, vaginal, or laparoscopic approach. Abdominal approach is chosen in 70% and vaginal approach in around 30% of hysterectomies; the figures varying from centre to centre <sup>1</sup>.

We have included only cases of open abdominal hysterectomy and vaginal hysterectomy. Laparoscopic approach mandates well trained personnel in an equipped facility <sup>2,3</sup>. We have started performing Laparoscopic hysterectomies recently. The number of these cases is small as we are still on the learning curve; hence they have not been included in this audit. The indications of hysterectomy differ between developed and developing countries. Quality of life issues are relevant in developed countries <sup>4</sup>. In developing countries, there is a strong aversion to surgery, fear of loss of the feminine body image and sexual rejection by their spouse. There is also strong cultural belief or even a religious attachment to preservation of menstruation and childbearing ability <sup>3,5,6</sup>.

So, most women in our environment usually present late with their complaints. The commonest indication in this part of the world is uterine fibroid <sup>5,7</sup>. Other indications for hysterectomy include; abnormal uterine bleeding, adenomyosis, endometriosis, and pelvic organ prolapse <sup>2,4,8,9</sup>. Other studies have shown a rate of 8.5% to 16.6% for hysterectomy among major gynaecological surgeries <sup>7,10</sup>. There has been no audit of hysterectomy in our hospital so far limited literature available on this topic. Hence, we embarked on this study to ascertain the indications, complications, correlation of preoperative diagnosis with the histopathology of Hysterectomies over a three year period.

**MATERIALS AND METHODS**

This cross sectional study was carried out, and population of this study was obs. and Gyn. Patients of Shalamar Hospital Lahore.

This study was a three year retrospective review of 755 cases of hysterectomy either for gynaecological or for obstetric reasons managed at Shalamar Hospital Lahore from 1st January 2019 through 31st December 2021. We have included only cases of open abdominal hysterectomy and vaginal hysterectomy. The sources of information were patients' case files, gynaecological ward records, anaesthetic records and theatre records. Information regarding the socio-demographic characteristics, presenting complaints, clinical findings, provisional diagnosis, intra operative and postoperative complications, associated morbidity and mortality pattern were collected. The information obtained was collated and analyzed using SPSS version 22.0.

**RESULTS**

During the period of three years there were 755 hysterectomies; 715 for gynaecological and 40 for obstetrical indications. A gynaecological indication was the reason for hysterectomy in 94% cases, while the remaining 6% had hysterectomy for obstetrical indications. The mean age of patients in our study was 49.2±12.6 years; ranging from 35-65 years. One patient at 18 years of age was an outlier. The mean age of patients who had abdominal hysterectomy was 45.3±7.4 years, while the mean age for patients who had vaginal hysterectomy was 58.7±5.3 years. 60 % of our patients were multiparous. The commonest presentation was mass abdomen in 30 % of our patients. These were cases of uterine fibroid followed by adenomyosis. This was followed by heavy menstrual flow in 9.5% and irregular bleeding in 8.6 % of our patients. Among the elderly, the commonest complaint was vaginal prolapse which was seen in 6 % of our patients. Massive postpartum bleeding not responsive to medical methods of management or conservative surgical procedures was the indication for hysterectomy in 0.8 % of our patients (Table 2). Consultants performed 20 % of the hysterectomies themselves depending on the level of difficulty and supervised the other 80 % of cases performed by registrars or post graduate residents. General anaesthesia was administered to 85 % patients and

regional anaesthesia to the rest. In the former category, an 86% had total abdominal hysterectomy while 9% had subtotal hysterectomy. The average duration of hospital stay following surgery was 3-5 days. The average indoor stay was 2-3 days after vaginal hysterectomy and 4-5 days after abdominal hysterectomy. There were 4 cases of mortality accounting for a mortality rate of 1.8%. Post operative morbidity was encountered in 29.4% of the patients. Anaemia was observed in 45.9%, post operative wound infection in 30.1%, pyrexia in 9% patients, chest infection in 6.7%, bladder injury in 3.6%, bowel injury in 1.8% of the patients.

Table 1:

Type of hysterectomies	2019	2020	2021	Percentage
Abdominal	257	166	287	94%
Vaginal	22	6	17	6%
Total	279	172	304	100%

Table 2:

Indication of hysterectomy	2019	2020	2021	Percentage
Fibroid Uterus	122	85	152	47.5 %
Adenomyosis	26	18	35	10.5 %
Heavy menstrual bleeding	27	15	30	9.5 %
Irregular bleeding	32	20	13	8.6 %
Uterovaginal Prolapse	17	7	19	5.7 %
Caesarean hysterectomies	12	10	20	5.6 %
Adnexal Mass	21	9	8	5.0 %
Cervical Fibroid	12	5	14	4.1 %
Pre-invasive Disease / Malignancy	7	2	8	2.2 %
Abnormal vaginal discharge.	3	1	5	1.2 %
Total	279	172	304	100 %

Table 3:

Histopathological diagnosis of specimen.				
Histological diagnosis	2019	2020	2021	Percentage
Leiomyomas (fibroids)	125	98	152	49.6 %
Adenomyosis	43	15	48	14.0 %
Chronic Cervicitis	45	15	30	11.9 %
Endometrial Polyp	22	9	38	9.1 %
Endometriosis	17	13	20	6.6 %
Tubo-ovarian disease (benign)	12	9	13	4.5 %
Serous Cystadenoma	5	6	2	1.7 %
Malignancy	4	2	1	0.9 %
Mucinous Cystadenoma	3	2	0	0.6 %
CIN I	2	1	0	0.4 %
Adenocarcinoma	1	1	0	0.3%
Total	279	172	304	100%

Table 4:

Intra operative and post operative complications				
Complication	2019	2020	2021	Percentage
Anemia	32	27	43	45.9%
Wound infection	26	13	28	30.1%
Fever	8	3	9	9.0%
Chest infection	5	3	7	6.7 %
Bladder injury	3	1	4	3.6%
Bowel injury	2	1	1	1.8%
Death	2	1	1	1.8%
Ureteric injury	1	1	0	0.9%
Vesicovaginal fistula	0	1	0	0.4%
Total	80	49	93	29.4%

## DISCUSSION

Hysterectomy remains one of the commonest surgery for benign disorders in gynaecological practice. Like any other operative procedure it has its own morbidity and risk of mortality with potential implications on the operator. The indication has to be clear, and the operator experienced<sup>9,11,12</sup>.

This study was embarked upon in our centre to determine the indications, complications, correlation of preoperative diagnosis and justification of hysterectomies. Abdominal hysterectomy was the commonest procedure performed. They included Total and

Subtotal abdominal hysterectomy. The reason for this was presence of an enlarged and well supported uterus; similar observations were made in other studies conducted in different countries<sup>5,8,11,12</sup>. Subtotal hysterectomy was performed as a result of extensive pelvic adhesions after previous surgeries or obstetric reasons like massive postpartum hemorrhage<sup>8,13</sup>. Vaginal hysterectomy was chosen for cases with prolapse in 6% of cases. This observation is comparable to those of previous studies conducted in different countries<sup>6,8,11,12,14</sup>. 70.6% of our patients had no immediate or late post operative morbidity. The rest had a variety of complications listed in table 4. The commonest morbidities noted were anemia and post operative wound infection, this is similar to the findings of other studies<sup>8,11,12</sup>. One case of ureteric injury following an abdominal hysterectomy and bladder injury following a vaginal hysterectomy, this was lower than the 2.58% reported in other studies<sup>10,13,14,15</sup>. The hospital stay was longer in women who had abdominal hysterectomy compared to vaginal hysterectomy; this is similar to findings from previous studies<sup>7,9,12</sup>. There were 4 cases of mortality following obstetric hysterectomy for primary postpartum haemorrhage.

Our study shows a gradual increase in the uptake of hysterectomy as a treatment option by our patients. This could be due to increased acceptance of this surgery as a justified treatment of refractory gynaecological conditions by better counseling, increasing safety of surgery and anaesthesia. Vaginal hysterectomy has been shown to be associated with prompt recovery from surgery and a shorter hospital stay. Hence, the skills to perform vaginal hysterectomy must be regularly practised. We have started performing Laparoscopic hysterectomies recently. The number of these cases is small as we are still on the learning curve; hence they have not been included in this audit. Hence, a need to master the skills with adequate equipment. More efforts should be put into advocacy as this will enable policy makers in our health institutions to procure the equipments required for laparoscopic procedures where it is considered affordable and necessary for patient care<sup>11,13</sup>. Postgraduate training programs should also continue emphasizing the need for gynecologist to acquire skills for vaginal hysterectomy and laparoscopic assisted hysterectomy.

## CONCLUSION

The conclusion of this study was a gradual increase in the uptake of hysterectomy as a treatment option by our patients. This could be due to increased acceptance of this surgery as a justified treatment of refractory gynaecological conditions by better counseling, increasing safety of surgery and anaesthesia.

**Conflict of interest:** there is no conflict of interest.

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