

Prevalence and outcome of hysterectomy in a peripheral medical college – A data-based retrospective study



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ABSTRACT

Background: Hysterectomy is the most common gynaecological surgical procedure. Abnormal uterine bleeding, uterine prolapse, malignant uterine condition are common indications. According to best of our knowledge very few studies done on hysterectomy on rural Indian women till now. Hence we want to highlight various factors regarding hysterectomies that were done on rural Indian women. **Aims and Objectives:** The study aimed evaluation of prevalence, demographic features, clinical presentation, indication, intra-operative findings, different types of operation, and histopathological diagnosis of patients who underwent hysterectomy in our center. **Materials and Methods:** This retrospective study done over 3 years from May 2017 to April 2020 in Department of Obstetrics and Gynecology of Rampurhat Government Medical College, West Bengal India. Case record and data of each patient were obtained from medical record section of the hospital and analyzed after taking permission of concerned authority. Inclusion criteria: Those underwent hysterectomy for gynecological indications during our study periods. **Results:** During the study period, total 6014 obstetrical and gynecological surgery performed; out of them, 424 cases of hysterectomies were studied, maximum patients (64.85 %) underwent hysterectomy at the age group of 41–50 years. Menorrhagia was the most common (61.32%) presenting complains. Leiomyoma was the most common (27.12%) indication followed by abnormal uterine bleeding (22.17%) and pelvic organ prolapses (11.57%). Maximum (79.25%) with abdominal route and 20.75% cases through vaginal approach. Total abdominal hysterectomy with bilateral salpingo-oophorectomy 270 cases (63.69%), vaginal hysterectomy with pelvic floor repair 60 (14.15%), total abdominal hysterectomy without oophorectomy 50 (11.79%), and radical hysterectomy 16(3.77%). Dominant histopathological type was leiomyoma (22.88%). Among various post-operative complications, urinary tract infection was the most common (9.19%), the most of the post-operative complication was found in abdominal hysterectomy. **Conclusion:** For treating pelvic pathologies such as uterine bleeding, adenomyosis, fibroid, pelvic inflammatory disease, malignant disorder, and genital prolapse hysterectomy is preferred procedure and abdominal route was most common. Complication of vaginal hysterectomy is less than abdominal approach. Vaginal approach should be preferable approach.

Key words: Adenomyosis; Hysterectomy; Leiomyoma; Pelvic organ prolapse

INTRODUCTION

In gynecology, hysterectomy is the most common major surgical procedure, second most common surgical

procedure in women worldwide and almost every third woman undergone hysterectomy at age 60 in US.¹ Incidence of hysterectomy varies from place to place depending on clinical factors and clinician.² In developed countries,

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incidence is 10–20%, where as in India 6–8%.³ In 1880, mortality rate of hysterectomy was 70% but now a days, it is <0.1%.⁴ This is due to practicing of aseptic technique, antiseptics, safe anesthesia, and new generation antibiotics. Although various conservative management of uterine lesion are available still hysterectomy is the most preferred procedure in the treatment of leiomyoma, adenomyosis, pelvic inflammatory diseases, and malignant disorder.⁵ Rate of hysterectomies also increased due to practicing prophylactic surgery against uterine cancer, premenopausal menorrhagia, and mild genital prolapse.⁶ In general, hysterectomies are performed to improve quality of life rather than to cure life-threatening condition.

Hysterectomy should not be done prophylactically against mild abnormal cervical cytology or without a trail of medical management in endometrial hyperplasia. As per view of Dicker, it is indicated when the risk of preserving uterus is greater than the risk of removal or when medical management fails to relief symptoms.⁷ Sometimes patients do not understand their symptoms and for this the findings often do not correlate with their complaints; clinical and pre-operative finding does not correlate with histopathological findings. Due to socioeconomic factors, availability of health-care facilities, late seeking of medical care by rural women, and when conservative treatment not possible, the best treatment will be hysterectomy but morbidity and mortality can be kept low with proper case selection.

Different approach of hysterectomy includes abdominal and vaginal approach. Abdominal consists of total abdominal hysterectomy, total abdominal hysterectomy with bilateral salphingo-oophorectomy, total laparoscopic hysterectomy, and radical hysterectomy. Vaginal route includes vaginal hysterectomy, vaginal hysterectomy with pelvic floor repair, laparoscopy-assisted vaginal hysterectomy, and non-descend vaginal hysterectomy.

Most common indication of hysterectomy is uterine myoma, abnormal uterine bleeding, post-menopausal bleeding, endometrial hyperplasia, uterine prolapse, uterine polyp, endometrial carcinoma, and carcinoma cervix. Leiomyoma, adenomyosis, and endometrial hyperplasia are the most common histopathological finding.⁸

Success of the operation limited by variation in patient compliance and need for long-term therapy and other side effects. The clinical and pre-operative finding often does not correlate with histopathological diagnosis. This retrospective study is to evaluate the indication, approach, demographic features, clinical presentation, and

histopathological diagnosis of the patient who underwent hysterectomy.

Aims and objectives

This study aimed evaluation of prevalence, demographic features, clinical presentation, indication, intra-operative finding, different type of operation and histopathological diagnosis of patients who underwent hysterectomy in our center.

MATERIALS AND METHODS

This retrospective study was carried out in the Department of Gynecology and Obstetrics, Rampurhat Government Medical College West Bengal, India. We had analyzed each hysterectomy case done over the period from May 2017 to April 2020. Admission tickets and related documents of each patient were collected from the record section of the college after taking permission from concerned authority. Age, parity, clinical presentation, clinical findings, and ultrasonographic findings were collected to establish the clinical diagnosis. We carefully review treatment history of each patient including types of medication and duration. The final indication, type of hysterectomy, and operative finding of each of such patient were recorded for analysis. Histopathological finding of individual cases was collected from the patients during post-operative follow-up visit. All the findings were recorded in a predesigned proforma. Numerical value was plotted in an Excel sheet. Continuous data were expressed in percentage and categorical data as mean. Microsoft Excel and SPSS software were used for statistical calculation.

RESULTS

Total 6014 obstetrical and gynecological operation was performed during our study period from May 2017 to April 2020. Out of them, 424 were hysterectomies. All of them were enrolled for this study. Prevalence was 7.05%.

Table 1 shows types of hysterectomy done during this period. Out of 424 cases, abdominal hysterectomy done in 336 (79.25%) patients. Total abdominal hysterectomy with bilateral salphingo-oophorectomy was done in

Table 1: Types of hysterectomy

Types of hysterectomy	Percentage	Number of cases
TAH+BSO	63.69	270
TAH	11.79	50
Radical	3.77	16
VH+PFR	14.15	60
NDVH	6.60	28
Total	100	424

270(63.69%), total abdominal hysterectomy 50(11.79%), and radical hysterectomy 16 (3.77%) cases. Vaginal hysterectomy done in 88 (20.75%) patients – out of this vaginal hysterectomy-associated pelvic floor repair was done in 60 (14.15%) cases and remainder undergo for non-descend vaginal hysterectomy 28 (6.60%). Along with total abdominal hysterectomy with bilateral salpingo-oophorectomy, five cases were underwent infracolic omentectomy and four cases omental biopsy, while two cases underwent appendectomy. In vaginal hysterectomy group in four cases, concurrent transobturator tape placement was done to treat urinary incontinence.

Maximum hysterectomy was done in the age group of 41–51 years. Out of 424 patients, 275 (64.85 %) are in this group with mean age is 42.5 years. Only 6 (1.47%) cases underwent hysterectomy above the age 70 years (Figure 1).

Table 2: Indication of hysterectomy

Indication	Number of cases	Percentage
Abnormal uterine bleeding	94	22.17
Leiomyoma	115	27.12
Benign ovarian tumour	43	10.14
Endometrial Hyperplasia	42	9.90
Pelvic organ prolapses	49	11.57
Endometriosis/adenomyosis	38	8.97
Chronic pelvic pain	26	6.13
CIN II/III	17	4.00
Total	424	100

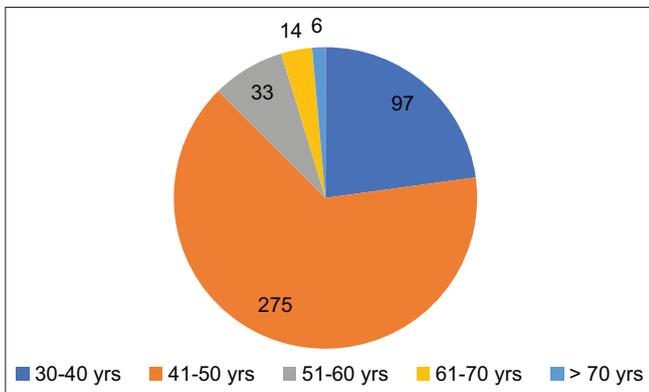


Figure 1: Age distribution

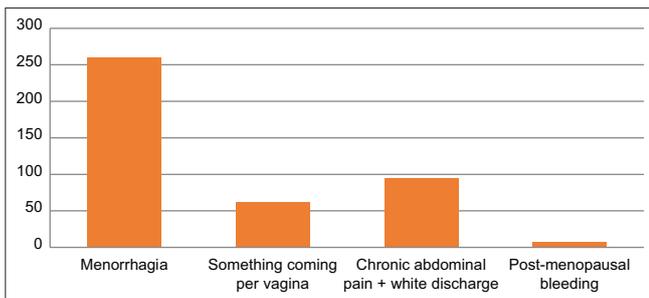


Figure 2: Clinical presentation of cases

Figure 2 shows the clinical presenting features, 261 (61.56%) patients presented with menorrhagia were the most common presentation. Next common presenting features were chronic abdominal pain with white discharge seen in 94 (22.16%) patients. Others less common presentation was something coming per vagina in 62 (14.62%) cases and post-menopausal bleeding 7 (1.65%).

As shown in Table 2, leiomyoma was the most common clinical indication seen in 115 (27.12%) cases followed by abnormal uterine bleeding 94 (22.17%), pelvic organ prolapses 49 (11.57%), benign ovarian tumor 43 (10.14%), endometrial hyperplasia 9.90%, endometriosis 38 (8.97%), and chronic pelvic pain and Cervical intraepithelial neoplasia (CIN) 3 was 26 (6.13%) and 17(4%) cases, respectively.

Table 3 describes histopathological findings – the most common histopathological variant was leiomyoma seen in 97 (22.88%) patients, the second most common was adenomyosis 92 (21.70%) followed by endometrial hyperplasia 61 (14.39%), proliferative endometrium 33 (7.78%), benign ovarian tumor 37 (8.73%), chronic cervicitis 35 (8.25%), features of both adenomyosis, and leiomyoma 40 (9.43%). About 1.89% and 4.95% cases showed features of CIN II/III and atrophic endometrium.

There were various post-operative complications recorded during this study period (Figure 3). About 39 (9.19%)

Table 3: Histopathological findings of cases

Histopathological finding	Number of cases	Percentage
Leiomyoma	97	22.88
Adenomyosis	92	21.70
Endometrial hyperplasia	61	14.39
Benign ovarian tumor	37	8.73
Adenomyosis with Leiomyoma	40	9.43
Chronic cervicitis	35	8.25
Proliferative endometrium	33	7.78
Atrophic endometrium	21	4.95
CIN II/III	8	1.89
Total	424	100

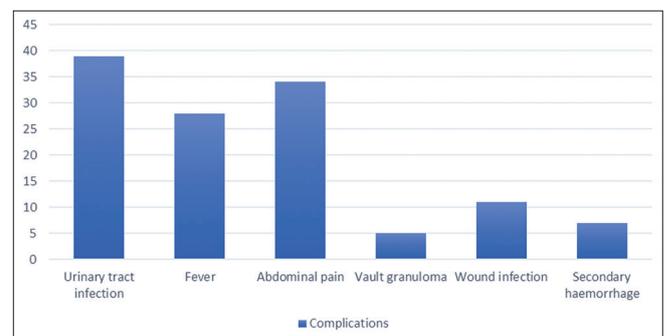


Figure 3: Post-operative complications

patients suffered from urinary tract infection, most common complication seen, followed by abdominal pain 34 (8.01%), fever 28 (6.60%), wound infection 12 (2.83%), and secondary hemorrhage 7 (1.65%). Only 5 (1.17%) cases were complicated by vault granuloma which was only seen in after vaginal hysterectomy. Incidence of complication was less in vaginal hysterectomy than abdominal. Only one patient develops more than one complication.

DISCUSSION

In this study, abdominal approach was recorded as most (79.25%) common approach and total abdominal hysterectomy with bilateral salphingo-oophorectomy was the most common (63.69%) type of hysterectomy. Bukar et al.,⁹ done a similar type of retrospective study at Nigeria where 79.3% cases were done by abdominal route. Neelgund and Hiremath¹⁰ done a retrospective analysis in India where 81.4% cases were done through abdominal approach.

In our study, rate of vaginal hysterectomy is 14.15% which is similar to Bukhari et al., 18.3%¹¹ and Neelgund and Hiremath 13.6%.¹⁰ Mean age of hysterectomy in this study is 42.5 years. and maximum (64.85%) case of hysterectomy was seen in the age group of 41–50 years. A study by Chryssikopoulos and Loghis¹² reported that 74.77% abdominal hysterectomy was aged 36–55 years.

Menorrhagia is the main presenting complaints (61.32%) in this study. Shergill et al.,¹³ reviewed 100 cases of hysterectomy and found that 66% women were complaining about abnormal menstrual flow.

Regarding clinical presentation, our study shows that menorrhagia is the main presenting complain (61.32%) followed by chronic abdominal pain with white discharge (22.41%). Something coming per vagina and post-menopausal bleeding are complain of 14.62% and 1.65% cases, respectively. These results are similar to study done by Neelgund and Hiremath. In India, where menorrhagia was seen in 63.4% cases, mass descending per vagina in 12.9%, and post-menopausal bleeding in 1.1% (10). Shergill et al., also reported in their study that menorrhagia was chief complain in 66% patients which is similar to our study result of menorrhagia 61.32%.¹³

Leiomyoma (27.12%) followed by abnormal uterine bleeding (22.17%) is main indication for hysterectomy in our study. Isaoglu reported leiomyoma as an indication for hysterectomy in 28.19% cases.⁸ Ishrat and Khan reported that hysterectomy done for fibroid in 28%

cases and abnormal uterine bleeding 21% cases.¹⁴ In our study, other indication of hysterectomy is benign ovarian tumor 10.14% pelvic organ prolapse 11.57%, endometrial hyperplasia 9.90%, CIN 3 4%, and endometriosis 8.97% which are similar to the study done by Neelgund and Hiremath.¹⁰ Regarding histopathological diagnosis in our study, leiomyoma is predominant (22.88%) followed by adenomyosis (21.70%), endometrial hyperplasia (14.39%), adenomyosis and leiomyoma (9.43%), benign ovarian tumor (8.73%), chronic cervicitis (8.25%), proliferative endometrium (7.78%), atrophic endometrium (4.95%), and CIN 3 (1.89%) – these results are similar to study of Neelgund and Hiremath.¹⁰ Sobande et al., reported that leiomyoma was the most common (25.8%) histopathological diagnosis followed by adenomyosis (22.7%).¹⁵ In this study on histopathological examination, endometrial hyperplasia was seen in 14.39% cases which is similar to study of Ranabhat et al.,¹⁶ Isaoglu,⁸ Neelgund and Hiremath.¹⁰ The most of Benign ovarian tumor diagnosed clinically and proven histologically. Atrophic endometrium diagnosed mainly in uterovaginal prolapse specimen and proliferative endometrium more than 45years aged patient with abnormal uterine bleeding. Chronic cervicitis was clinically diagnosed and histologically proven. CIN3 was d Papanicolaou smear stain and proved by histology. Correlation between pre-operative diagnosis and histopathologic finding is 90–100%. The most common post-operative complication in this study is urinary tract infection (9.19%) followed by abdominal pain (8.01%), fever (6.60%), wound infection (1.65%), and vault granuloma (1.17%) – incidence of these is similar to study done by Nazneen et al.,¹⁷ Prevalence is 7.05% which is much lower than 9.3% finding of Kouam et al., 2005 and similar to 5.1% by Ahmed 2015.^{18,19}

Limitations of the study

As our study was a single centre retrospective study, a larger multi centre prospective study is better.

CONCLUSION

Hysterectomy is the preferred procedure for the treatment of pelvic pathologies such as leiomyoma, pelvic organ prolapses, adenomyosis, pelvic inflammatory disease, and malignant disorders. The most common route of hysterectomy is abdominal approach and choice of approach related to underlying indications of surgery, need for adnexal surgery, and surgeon's preference. The most common age of hysterectomy is 41–50 years; preservation of ovaries depends on age of patient as well as condition of ovaries and target is to preserve ovaries below 40 yrs. This study revealed that leiomyoma is the most common

indication as well as the most common histopathological finding. Few patient was performed hysterectomy without any trail of medical management. If they were treated with medical therapy, they may be curried without surgery. Complication of vaginal hysterectomy is less than abdominal approach. We conclude medical therapy before doing hysterectomy. Vaginal approach should be preferable approach.

As this study done in a single center, a large multicenter analysis has been more accurate.

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SB- Concept, design, manuscript preparation, data analysis, and review of literature; **RK**- Data collection, data analysis, and manuscript preparation; and **BB**- Review of literature and finalization of manuscript

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