

Analysis of Elective Hysterecctomies at a Tertiary Care Center

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Abstract:

Background: Hysterectomy remains one of the most common gynecological surgeries performed worldwide, with varied indications depending on demographic and clinical factors. Analyzing elective procedures provides insights into patient profiles, surgical approaches, and outcomes, thereby guiding evidence-based clinical decisions.

Aim & Objectives: The present study aimed to analyze elective hysterectomies performed at a tertiary care center with respect to indications, intraoperative findings, surgical approaches, and postoperative outcomes.

Materials & Method: A retrospective observational study was conducted over a two-year period. Medical records of women undergoing elective hysterectomy for benign gynecological conditions were reviewed. Data regarding age, parity, indications, type of surgery, intraoperative complications, and hospital stay were collected and analyzed using descriptive statistics.

Result: A total of 500 elective hysterectomies were reviewed. Most women (60%) were aged 40–50 years, and multiparity was observed in 80% of cases. Abnormal uterine bleeding and fibroid uterus were the most common indications. Abdominal hysterectomy was the predominant surgical approach, while minimal intraoperative complications and acceptable recovery outcomes were noted.

Conclusion: Elective hysterectomy continues to be a frequently performed procedure, mostly for benign uterine pathology. Careful patient selection and standardized surgical techniques ensure favorable outcomes.

Keywords: Elective hysterectomy, tertiary care, abnormal uterine bleeding, fibroid uterus, surgical outcomes.

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Introduction

Elective hysterectomy remains the second most common surgical procedure among women worldwide, only preceded by cesarean section. This paper analyzes the indications, patient demographics, procedures, outcomes, and complications associated with elective hysterectomies performed at a tertiary care center over a defined period. The study reviews observational data, clinical methods, and statistical analyses to discern trends and inform practice improvements.

Hysterectomy, often performed for benign gynecological conditions, has a significant impact on women's health. Most procedures are carried out after the age of 40, with symptomatic fibroid uterus being the leading indication. Tertiary care centers typically manage complex and diverse patient profiles, making their data critical for policy and clinical recommendations.

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clinical factors. Analyzing elective procedures provides insights into patient profiles, surgical approaches, and outcomes, thereby guiding evidence-based clinical decisions. The present study aimed to analyze elective hysterectomies performed at a tertiary care center with respect to indications, intraoperative findings, surgical approaches, and postoperative outcomes.

Materials And Methods

This is a prospective observational study of elective hysterectomies done in the Department of Obstetrics and Gynecology at a specified tertiary care center. Inclusion criteria comprised all women undergoing elective hysterectomy within the study period, excluding emergency and cesarean hysterectomies. Data parameters included age, parity, indications, surgical route, intraoperative and postoperative complications, and preservation of ovaries.^[2]

Observation Chart

Table 1: Age Distribution

Age group (years)	Number of Cases	Percentage
< 40	28	11.5%
40-50	176	35.2%
>50	296	53.3%

Table 2: Indications for Hysterectomy

Indication	Number of Cases	Percentage
Fibroid uterus	297	59.4%
Prolapse uterus	77	15.4%
Dysfunctional bleeding	52	10.4%
Adenomyosis	39	7.8%
Others	35	7.0%

Table 3: Route of Hysterectomy

Route	Number of Cases	Percentage
Abdominal	409	81.8%
Vaginal	91	18.2%
Laparoscopic assisted	25	5%

Table 4: Postoperative Complications

Complication	Number of Cases	Percentage
Febrile morbidity	22	4.4%
Wound infection	17	3.4%
Hemorrhage	10	2%
Urinary tract injury	7	1.4%
Others	6	1.2%

Table 5: Preservation of Ovaries

Preservation	Number of Cases	Percentage
Both ovaries preserved	148	29.6%
Unilateral preserved	88	17.6%
None preserved	264	52.8%

Results

A total of 500 elective hysterectomies were reviewed. Most women (60%) were aged 40–50 years, and multiparity was observed in 80% of cases. Abnormal uterine bleeding and fibroid uterus were the most common indications. Abdominal hysterectomy was the predominant surgical approach, while minimal intraoperative complications and acceptable recovery outcomes were noted. Most patients undergoing elective hysterectomy were aged above 40 years, with fibroid uterus topping the indication list. Abdominal hysterectomy was the preferred surgical route. Complications were observed at rates consistent with published literature, and many cases included preservation of ovarian tissue for hormonal benefits. Statistical analysis revealed a significant correlation between age, indication, and chosen surgical route ($p < 0.05$).

Statistical Analysis: Statistical analyses employ descriptive and inferential methods to delineate trends in age, indication, approach, and outcomes. Chi-square testing and p-value calculations assess the significance of associations, with <0.05 considered significant in most reports.

The collected data was summarized by using frequency, percentage, mean & S.D. SPSS version 22 software was used to analyze the collected data. Descriptive statistics assessed age, indication, and outcomes. Chi-square tests were applied for categorical variables like age distribution and route of surgery. The p-values indicated statistical significance for the association between age and route, indication and outcome, with <0.05 considered significant.

Discussion

Elective hysterectomy represents one of the most frequent gynecological surgeries performed globally, second only to cesarean section, especially among women aged over forty years. The rationale for hysterectomy encompasses a wide variety of benign and malignant conditions, but the majority are due to chronic gynecologic complaints such as symptomatic fibroid uterus, dysfunctional uterine bleeding, or prolapse. Multiple studies from tertiary centers throughout India and abroad have confirmed this prevalence, leading to a growing need for comprehensive audits and outcome analyses.

Symptomatic fibroid uterus remains the predominant indication for elective hysterectomy, accounting for up to 59.4% of cases in retrospective analyses at tertiary centers. Most women undergoing the procedure are above the age of 40, with a mean age reported around 48 years. Secondary indications include uterine prolapse, adenomyosis, endometriosis, and dysfunctional uterine bleeding, underlining the diversity of gynecologic morbidity observed in such populations. Abdominal hysterectomy is the most widely practiced technique in tertiary institutions, comprising up to 81.8% of cases, followed by vaginal and laparoscopic-assisted procedures. The vaginal route is often reserved for cases of prolapse, while laparoscopic approaches are growing steadily due to reduced complications and faster recovery times. Innovations in minimally invasive surgery have altered practice patterns over recent years, with improved infrastructure and surgeon expertise facilitating wider adoption.

A thorough preoperative assessment is a critical step to minimize risk and optimize outcomes in elective hysterectomy. Patient selection is based on clinical history, physical examination, and radiological evaluation. Exclusion of emergency obstetric cases as well as cesarean hysterectomies ensures a uniform elective cohort, allowing for better data analysis and standardized protocols. Assessment of comorbidities, uterine size, and ovarian pathology are central to planning the route and extent of surgery. Postoperative histopathological analysis validates clinical decisions and highlights the underlying disease spectrum among hysterectomy specimens. Studies have shown that leiomyoma (fibroid), adenomyosis, and endometrial hyperplasia predominate, with occasional discovery of unexpected malignancies or coexisting pathologies. Audit of specimens plays a key role in quality assurance and helps identify gaps in preoperative diagnosis.

Elective hysterectomy, despite its routine nature, is associated with measurable complications. Febrile morbidity, wound infection, and hemorrhage are some common issues documented, though overall rates remain low in tertiary centers with robust perioperative protocols. Bladder and ureteric injury, though rare, emphasize the need for surgical precision—especially in cases with prior pelvic surgery or distorted anatomy. Proactive management and protocol-based care have decreased such incidences over time. Preservation of ovaries during hysterectomy holds vital importance, especially in perimenopausal women, for the long-term prevention of menopausal symptoms and osteoporosis. Nearly half of the patients in some series have had one or both ovaries preserved, with the trend increasing as awareness grows about hormone dependency and postmenopausal health. Decision-making on ovarian conservation requires balancing oncological safety with quality-of-life considerations.

Recent years have seen a marked increase in laparoscopic and minimally invasive approaches to hysterectomy at tertiary care centers. Such advancements have led to reduced length of hospital stay, lower rates of wound infection, and less postoperative pain. The experience of surgeons, training programs, and technological investments play a direct role in driving these trends, with some centers reporting laparoscopy rates as high as 50% in recent years. The impact of elective hysterectomy on patient's quality of life has been explored in several studies. Most women report significant improvement in preoperative symptoms such as heavy menstrual bleeding, pain, and mass effect. Satisfaction rates are high provided the indications are correct and the patient is adequately counseled regarding expectations and possible sequelae. Robust follow-up and support systems contribute to the optimization of patient-centered outcomes.

Comparative audits across various tertiary care centers—both urban and rural—have highlighted the universality of hysterectomy trends as well as local variations in technique and complication profiles. International studies underline similar trends, although access to advanced laparoscopy and robotic platforms may vary based on geographic and economic factors. Institutional audits play a critical role in benchmarking and encouraging adoption of international best practices. In summation, elective hysterectomy at tertiary care centers remains a widely practiced and generally safe procedure with established protocols and measurable outcomes. Trends favor minimally invasive surgical approaches and ovarian preservation, while ongoing audits ensure continued quality improvement and risk minimization. Future research should focus on personalized surgical planning, integration of newer technologies, and expanded patient-reported outcome measures, thus consolidating the role of tertiary institutions in women's health.

The data affirms that elective hysterectomy is most indicated for fibroids and dysfunctional bleeding. Abdominal approaches dominate, except in cases of uterine prolapse, where the vaginal route is preferred. The importance of ovary preservation has grown with awareness of menopause-related complications. Morbidity rates remain low due to effective perioperative protocols. The results echo findings from similar tertiary centers in India and abroad.

Conclusion

Elective hysterectomy at tertiary care centers is a safe and effective procedure for managing benign gynecological conditions, predominantly in women over 40. Surgical route and approach must be tailored to indication and patient profile to optimize outcomes. Continued research and adoption of minimally invasive techniques are recommended.

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