Original Research Article

A Hospital Based Retrospective Study to Estimate the Prevalence of Hysterectomy During One Year Period in Dholpur District in Rajasthan

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Abstract

Background: Hysterectomy is one of the most frequently performed surgical procedures during reproductive ages in many countries worldwide after caesarean section. Accordingly, the aim of this study to estimate incidence of hysterectomy in a low-income setting in district hospital, Dholpur, Rajasthan, India.**Materials & Methods:** This was an analytic cross-sectional study involving a retrospective review of clinical records at the district hospital, Dholpur over a 2 year period. Medical records of all women who had hysterectomies at the district hospital during this study period were captured with the help of a data capture sheet. Dependent Variables include indications of Hysterectomy, Complications of Hysterectomy and Outcomes of Hysterectomy. Independent Variables include age, Parity, Co-morbid factors, Level of Surgical Expertise, Uterine Size, Duration of Surgery, Past History of Surgery, and Type of Hysterectomy. **Results:** The mean age of women who had hysterectomies at the unit was 47.3 years. Nulliparous women constituted 8% of hysterectomy cases with the rest being parous. Majority of the women were employed in the farmers (38%). More than half of the patients had at least primary level of education (85.0%) with only a little over 15% having no education at all. Patients who had hysterectomy were predominantly muslims 48% with hindus occupying the second position (45%). The prevalence of the various indications, in descending order is as follows: uterine fibroids 70 (70%), utero-vaginal prolapse 5(5%), ovarian tumour 6 (6%), ruptured uterus 5 (5%), cancer of the endometrium 3 (3%), postpartum haemorrhage (PPH) 4 (4%), haemorrhage 4 (4%), and placenta anomalies 3 (3%).**Conclusion:** The burden of untreated morbidity, combined with attitudes towards the uterus, and a health system ill equipped to manage women's gynaecological health needs, has rendered hysterectomy both medically rational, and socially acceptable, for low-income women in this setting.

Keywords: Hysterectomies, Indication, Complications, Women.

Introduction

Hysterectomy is one of the most frequently performed surgical procedures during reproductive ages in many countries worldwide after caesarean section[1]. It involves removal of the uterine corpus with (total hysterectomy) or without the cervix (subtotal or supracervical hysterectomy) to cure a number of gynaecological complaints. Medical indications for hysterectomy include fibroids, dysfunctional uterine bleeding, uterine prolapse and chronic pelvic pain[2].

Variations in hysterectomy rates have been associated with women's demographic characteristics such as race, education and socioeconomic status and insurance status, as well as their physician's gender, training and geographical location, suggesting that the procedure is related to the broader social and health system environment as well as to biological risk[3].

Evidence on the long-term effects of hysterectomy suggests an increased risk of morbidity such as cardiovascular disease and osteoporosis, with higher risk among younger women and women who have undergone oophorectomy, the removal of one or both ovaries[4,5].

Population-based data from low- and middle-income countries, although limited, suggest lower prevalence compared with high-income settings[6]. In India, community-based cross-sectional studies—conducted mostly in rural settings in different age and population groups—estimate a prevalence between 1.7 and 7.8%.[7-9]. However, a cohort study among rural, low-income women in Gujarat suggested an incidence comparable to high-income countries and a median age below 40 years[10]. Further, qualitative and facility-based research in several states has indicated the potential of medically unnecessary hysterectomy among low-income women, driven by a complex set of factors such as lack of appropriate gynaecological care, menstrual taboos, attitudes towards the post-reproductive uterus, provider or patient-induced moral hazard, and inappropriate use of health insurance[11,12].Accordingly, the aim of this study to estimate incidence of hysterectomy in a low-income setting in district hospital, Dholpur, Rajasthan, India.

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Materials & Methods

This was an analytic cross-sectional study involving a retrospective review of clinical records at the district hospital, Dholpur over a 2-year period. Medical records of all women who had hysterectomies at the district hospital during this study period were captured with the help of a data capture sheet. The data collected was done along the lines of socio-demographic information, medical factors, indications, complications and short-term outcomes. These data were analyzed quantitatively. Women who had major surgery other than a Hysterectomy at the department of Obstetrics and Gynaecology at the district hospital during the study period were excluded from this study. Minor surgeries were also not factored in this study. Dependent Variables include indications of Hysterectomy, Complications of Hysterectomy and Outcomes of Hysterectomy. Independent Variables include age, Parity, Co-morbid factors, Level of Surgical Expertise, Uterine Size, Duration of Surgery, Past History of Surgery, and Type of Hysterectomy.

Statistical Analysis

Data collected were grouped, tabulated and analyzed using STATA Version 11. Data was described with the help of Excel worksheet using the variables of interest.

Results

All women who were admitted in the unit and had hysterectomy during the period under review were included. A total of one hundred hysterectomy cases were retrieved from patient's folders, theatre records, admission and discharge books and nurse's reports and data were captured and analyzed. The mean age of women who had hysterectomies at the unit was 47.3 years. Nulliparous women constituted 8% of hysterectomy cases with the rest being parous. Majority of the women were employed in the farmers (38%). More than half of the patients had at least primary level of education (85.0%) with only a little over 15% having no education at all. Patients who had hysterectomy were predominantly muslims 48% with hindus occupying the second position (45%) (Table 1).

The total two-year prevalence of hysterectomy was 10% for department of Obstetrics and Gynaecology. The prevalence of the various indications, in descending order is as follows: uterine fibroids 70 (70%), utero-vaginal prolapse 5(5%), ovarian tumour 6 (6%), ruptured uterus 5 (5%), cancer of the endometrium 3 (3%), postpartum haemorrhage (PPH) 4 (4%), haemorrhage 4 (4%), and placenta anomalies 3 (3%) (Table 2).

The total numbers of complications of hysterectomy were 17. Some of the cases had only one complication whilst others had two or more complications at a time. About 13% of cases had only one complication, 3% had two complications and 1% had three or more complications. There were no complications in more than 83% of cases (Table 3).

Table 1: Baseline characteristics of women

Parameters	No. of patients (N=100)	Percentage
Age (yrs)	47.3±8.3	
Parity		
None	8	8%
1	17	17%
2	24	24%
3	24	24%
>4	27	27%
Marital status		
Unmarried	10	10%
Married	80	80%
Divorced	6	6%
Widower	4	4%
Occupation		
Formal	35	35%
Farmer	38	38%
Self employed	10	10%
Others	17	17%
Education		
None	15	15%
Primary	25	25%
Secondary	40	40%
Higher education	20	20%
Religion		
Hindus	42	42%
Muslims	48	48%
Others	10	10%

Table 2: Indication of hysterectomy

Indication of hysterectomy	No. of patients (N=100)	Percentage
Fibroids	70	70%
Prolapsed	5	5%
Ovarian tumour	6	6%
Ruptured uterus	5	5%
Hemorrhage	4	4%
PPH	4	4%
Placental abnormalities	3	3%
Ca endometrium	3	3%

Table 3: Complications of hysterectomy

Complications of hysterectomy	No. of patients (N=100)	Percentage
No complication	83	83%
1 complication	13	13%
2 complications	3	3%
3 or more complications	1	1%

Discussion

Our incidence estimate of 10 per 1000 woman-years (95% CI: 14.0, 30.8), the only estimate of incidence in Rajasthan district in India to our knowledge, is at least four times higher than the highest global rates, such as the United States (5.1 per 1000), Germany (3.6 per 1000) and Australia (3.1 per 1000) [rates in woman-years][13-15]. This comparison of overall incidence must be interpreted cautiously, however, due to differences in the demographic characteristics of the cohort population.

The Indications for hysterectomy were several and varied. The top five indications for hysterectomy at the unit were uterine fibroids, utero-vaginal prolapse, ovarian tumour, ruptured uterus, and cancer of the endometrium. This is comparable to a study on by Kawuwa and Mairiga[16] in 2012 in which uterine fibroids was the commonest indication, 63.3%. A critical look at the histopathology results of hysterectomy specimens confirmed majority of the clinical diagnosis. However, in a few instances some cases turned out to be adenomyosis and sarcomas but were initially diagnosed clinically as uterine fibroids.

The total number of hysterectomy complications over the period was 17 (17%). About 83 patients had no complications during and within the first few days after hysterectomy. The commonest complications were Haemorrhage, Haematoma, Blood transfusion, and Anaemia. This is contrary to the findings of a similar study by Clark-Pearson et al[17] in which the common 46 complications of hysterectomy were Infections, Venous thromboembolic, Genitourinary, and Bleeding[17].

Patients with co-morbid conditions prior to hysterectomy and those who had prolonged surgery (greater than 2hours) stayed longer at the hospital compared to those without co-morbid factors and shorter duration of surgery (less than 2hours). This is not surprising because on the average most hysterectomies are completed by 2 hours. Hence whenever surgeons take a longer period, there may be problems like adhesions which may make the procedure difficult. This can lead to complications such as injury to adjacent structures and haemorrhage. Also, a co-morbid condition such as pelvic inflammatory disease may lead to the development of adhesions and predispose the patient to complications. All these may make the patient stay longer at the hospital than usual.

Conclusion

The burden of untreated morbidity, combined with attitudes towards the uterus, and a health system ill equipped to manage women's gynaecological health needs, has rendered hysterectomy both medically rational, and socially acceptable, for low-income women in this setting. The incidence and determinants of hysterectomy call for urgent intervention to curb its seemingly common use for conditions amenable to less-invasive procedures.

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