

Study of hysterectomy cases in a tertiary care centre

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Abstract

Background: Hysterectomy is the second most common surgery done in women, next only to caesarean section. Hysterectomy can be done through abdominal, vaginal and laparoscopic routes, depending upon the clinical condition, surgeon's preference and patient's choice. This study aims to analyse the hysterectomy cases performed in our tertiary care centre over a period of one year based on age, common indications, route of hysterectomy. **Material and Methods:** Present study was a prospective, observational study conducted in patients who underwent elective hysterectomy in our tertiary care hospital. **Results:** After applying inclusion and exclusion criteria, total 243 patients were included in present study. Most common age group was 46-55 years age group. Most common indication for hysterectomy were uterine fibroid (33 %) followed by Uterovaginal prolapse (27 %) and abnormal uterine bleeding (12 %). Most common route for hysterectomy was abdominal (56 %), followed by vaginal (39 %) and laparoscopy (5 %). For elective hysterectomy, haemoglobin built was done in all patients. Still 18% patients required post-operative blood transfusion. 4 cases of bladder injury and 1 case of intestinal injury during intra-op period was noted. We noted anemia (6%), fever (4%), wound infection (1%) in post-op period. **Conclusion:** Hysterectomy is a major gynecologic surgery and should be considered as a final treatment option. Medical management should be preferred as far as possible. Vaginal or laparoscopic route should be preferred

Key Word: Hysterectomy, Indication of hysterectomy, Route of hysterectomy

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INTRODUCTION

Hysterectomy is the second most common surgery done in women, next only to caesarean section. Hysterectomy i.e. removal of uterus is primarily done to save women from uterus-related life-threatening problems and for a better and healthy life. The common indications of hysterectomy are fibroid uterus, abnormal uterine bleeding, ovarian tumour, utero vaginal prolapse, malignancies of uterus, cervix and ovaries. The

indications of hysterectomy vary from benign to malignant conditions. Apart from common indications, incidence and route of hysterectomy in society have been associated with women's characteristics such as education, socioeconomic class, insurance status, along with treating gynaecologist's training and geographical location, suggesting that the procedure is related to the broader social and health system environment as well as to biological risk¹. Minimal invasive techniques for benign gynecological diseases are responsible for fall in the trends for hysterectomy and focus in shifted to lesser invasive techniques such as endometrial ablation, thermal balloon therapy, uterine artery embolization, or hormone releasing intrauterine system, etc². Hysterectomy can be done through abdominal, vaginal and laparoscopic routes, depending upon the clinical condition, surgeon's preference and patient's choice. The advantages of laparoscopic and robotic-assisted hysterectomy include less post-operative morbidity, short hospital stay and early resumption of work after surgery³. Women aged less than 45years had a significant long-term morbidity

when concurrent oophorectomy is done with hysterectomy. When concurrent oophorectomy is done in premenopausal women, early menopause with its complications like psycho sexual dysfunction, osteoporosis and cardiovascular complications can occur. Women with only removal of uterus had 3 times greater risk of CVD, but if ovaries are also removed the risk rises 7 times⁴. Mean age of onset of menopause in those who underwent hysterectomy is 3.7 years earlier than average even when the ovaries are preserved⁵. Hysterectomy is also associated with other intra-operative and immediate post-operative risks such as haemorrhage requiring blood transfusion, trauma to urinary tract or intestine, etc. which can extrapolate due to pre-existing co-morbidities. This study aims to analyse the hysterectomy cases performed in our tertiary care centre over a period of one year based on age, common indications, route of hysterectomy and preservation of ovaries.

RESULTS

After applying inclusion and exclusion criteria, total 243 patients were included in present study. Most common age group was 46-55 years age group. One patient underwent hysterectomy at 34 years age, patient had large intramural fibroid.

Table 1: Age profile

Age (in years)	No. of patients	%
>35	1	0.41 %
36-45	27	11%
46-55	134	56%
56-65	64	27%
>65	17	7%

Most common indication for hysterectomy were uterine fibroid (33 %) followed by Uterovaginal prolapse (27 %) and abnormal uterine bleeding (12 %). Other less common indications were benign ovarian tumour (9%), adenomyosis (6%), endometriosis (5%), postmenopausal bleeding (5%), malignant ovarian tumour (2%), cervical intraepithelial neoplasia (2%), carcinoma endometrium (1%), pelvic inflammatory disease (0%)

Table 2: Indications of hysterectomy

Indications	No. of patients	Percentage
Fibroid uterus	79	33%
Uterovaginal prolapse	64	27%
AUB	29	12%
Benign ovarian tumour	21	9%
Adenomyosis	15	6%
Endometriosis	12	5%
Postmenopausal bleeding	11	5%
Malignant ovarian tumour	5	2%
Cervical intraepithelial neoplasia	4	2%
Carcinoma endometrium	2	1%
Pelvic inflammatory disease	1	0%

Most common route for hysterectomy was abdominal (56 %), followed by vaginal (39 %) and laparoscopy (5 %). In 18 % cases we performed NDVH. Less number of laparoscopic cases were due to training phase of faculty.

MATERIAL AND METHODS

Present study was a prospective, observational study conducted in the department of obstetrics and gynaecology, Katuri Medical College and Hospital, Guntur. Study duration was 1 year, from June 2018 to June 2019. Approval was obtained from institutional ethical committee for present study.

Inclusion criteria: Patients who underwent elective hysterectomy in hospital

Exclusion criteria: Emergency hysterectomy and caesarean hysterectomy. Written informed consent was taken from patients. Patient details regarding age, indications, relevant medical/surgical history, clinical and radiological findings were collected. After surgery route of hysterectomy, preservation of ovaries, intra-operative complications, post-op recovery, etc was noted. Data collected was analysed statistically. Descriptive statistics based on the parameters of age, indications, route and preservation of ovaries were taken and presented in percentages. Statistical analysis was done using descriptive statistics.

Table 3: Routes of hysterectomy

Route	Types	No. of patients	Percentage
Abdominal	TAH	73	30%
135 (56 %)	TAH BSO	62	26%
Vaginal	VH PFR	54	22%
97 (39 %)	NDVH	43	18%
Laparoscopy 11 (5 %)	LAVH	11	5%
	Total	243	

For elective hysterectomy, haemoglobin built was done in all patients. Still 18% patients required post-operative blood transfusion. 4 cases of bladder injury and 1 case of intestinal injury during intra-op period was noted. No ureteral injury, death was noted in present study.

Table 4: Intra-operative complications

Variable	No. of patients (Percentage)	Route		
		Abdominal	Vaginal	Laparoscopy
Hemorrhage (required at least 1 pint PCV transfusion)	44 (18.1 %)	32	11	1
Bladder injury	4 (1.65 %)	3	1	0
Intestinal injury	1 (0.41)	1	0	0
Ureteral injury	0	0	0	0
Death	0	0	0	0
Total	49 (20.16)	36	12	1

We noted anemia (6%), fever (4%), wound infection (1%) in post-op period. No hemoperitoneum, pelvic abscess, Phlebitis, pulmonary emboli, urinary tract infection, death noted in post-op period in present study. Table 5- Post-operative complications

Variable	No. of patients (Percentage)	Route		
		Abdominal	Vaginal	Laparoscopy
Anemia	15 (6%)	11	3	1
Fever	10 (4%)	8	2	0
Wound infection	3 (1%)	3	0	0

DISCUSSION

Hysterectomy is the most common gynecological surgery performed worldwide. Every hysterectomy should be indicated as this is a major surgery which has its own physical, economical, emotional, sexual and medical significance to the women. A study by Desai *et al*, from Gujarat has shown that 13 % of women had undergone hysterectomy at an average age of 37 years, in India⁶. In present study, most common age group was 46-55 years with the mean age at which hysterectomy done was 44±8 years. Pranita *et al* noted the mean age was as 40±6 years and the most common age group appeared to be 40-49 years⁷. In study by Pandey D *et al*, mean age of women undergoing hysterectomy was 48 ± 9.9 years⁸. Fibroid and genital prolapse were most common indications for hysterectomy in present study. Patients with fibroids and AUB were most often in the fourth and fifth decade and hysterectomy with bilateral salphingo-oophorectomy was the most common procedure done. Multiple studies report AUB and fibroid has common causes for hysterectomy⁹. AUB is the most common presenting symptom in the gynaecological department and in terms of relief, hysterectomy is the most common surgical procedure

done for patients symptom relief and general satisfaction¹⁰. Use of LEEP and Cryotherapy to manage cervical dysplasia at an early stage prevented many women from undergoing hysterectomy. LEEP had an upper edge over cryotherapy as the histopathological specimen was there¹¹. The route of surgery must be individualized to the patient and surgeon preference. Numerous determining factors include indications for surgery, patient characteristics including body mass index, prior surgeries, concomitant procedures, risk of complications, length of hospital stay, recovery and cost effectiveness. Overall, vaginal hysterectomy is considered the surgery of choice if it is feasible, because the vaginal route is associated with fewer complications than other methods¹². When vaginal and laparoscopic routes are compared, studies have shown that laparoscopy does not provide any added benefit but is associated with higher cost^{13,14}. Thomas G Stovall *et al* found that 70% to 80% of hysterectomies are performed by abdominal route and vaginal approach is usually reserved for utero-vaginal prolapse¹⁵. In a study by Sharma C *et al* in rural Indian population showed vaginal hysterectomy to be the most common type of hysterectomy performed in the

Population studied. Vaginal hysterectomy can be done in the setting of nulliparity, enlarged uterus, obesity and previous cesarean delivery. Surgeons need to change previously held beliefs regarding relative contraindications to the approach in order to increase the vaginal route than abdominal route. has been reported by other studies². With adequate vaginal access and good uterine mobility, vaginal hysterectomy can be easily performed. Initial descent can be obtained by cutting Mackenrodt's and uterosacral ligaments. Most common indication of NDVH in our study was dysfunctional uterine bleeding not responding to conservative treatment. Non-descent vaginal hysterectomy should be the procedure of choice unless contra-indicated. Not only is it the least time consuming and also has the least intra-operative and post-operative complication rate, it is equally cost-effective and cosmetically appealing¹⁶. In a study by Bala *et al*, both ovaries were removed in 87.3% cases¹⁷. In present study bilateral salphingo-oophorectomy was done in only 26% cases, which is far lower than above study. There was a non-statistically significant association of intra-operative surgical complications of hysterectomy that was ascribed to total abdominal hysterectomy compared to the other surgical routes. Uterine artery embolization (UAE) has now been well recognized as a uterine-sparing (fertility preserving) method of treating fibroids. More recently, the introduction of ultrasound waves (MRgFUS) or radiofrequency for uterine fibroid ablation has added to the options of minimal access treatment^{18,19}. However, most of these treatment modalities for uterine fibroids are not yet accessible to the Cameroon population.

CONCLUSION

Hysterectomy is a major gynecologic surgery and should be considered as a final treatment option. Medical management should be preferred as far as possible. Vaginal or laparoscopic route should be preferred. Adequate counselling and if required treatment should be done for postmenopausal changes

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