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GYNAECOLOGICAL HYSTERECTOMY;
INDICATIONS, MORBIDITY AND MORTALITY AT A TERTIARY CARE HOSPITAL

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Abstract…Objectives: The aims of study are (1)To make an audit of hysterectomies by either route in a teaching hospital.(2)To determine the morbidity and mortality associated with this procedure. **Study design:** Descriptive study **Setting:** Gynae & Obstetrics units, Independent University Hospital Faisalabad **Period**: From 1-1-2006 to 31-12-2008 **Material & Methods**: retrospective collection of data by convenience sample technique. **Results:** 27% cases were due to fibroids, 22% were due to uterovaginal prolapse, 19% (DUB), 13% (chronic PID). The complications were 28% (UTI) by abdominal route and 13.3% were by vaginal route, 26.6% wound infection and 2.6% in vaginal hysterectomy, rest of complications were comparable by both routes. **Conclusion:** vaginal hysterectomy has more promising results but is reserved for specific indications.

Key words: Abdominal hysterectomy, vaginal hysterectomy, complications, laparoscopic assisted vaginal hysterectomy.

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INTRODUCTION:

Hysterectomy is the surgical removal of uterus. It may be complete or total (involving uterine fundus, body and cervix) or partial / subtotal (removal of uterine body, leaving the cervix intact) [1]. It is the most commonly performed major gynaecological procedure. In United Kingdom, one in 5 women is likely to have a hysterectomy by age 60 while in USA an average of 622,000 hysterectomies a year have been performed in past decade[2] .Oophorectomy is the removal of ovaries and is mostly done in high risk cases of ovarian carcinomas or pathology and also in patients with menopause who have some other gynaecological disease. Although studies have reported that oophorectomy in the absence of any recognizable pathology cannot be justified because removal of ovaries lead to many health risks to life of women[3,4]. Hysterectomy may be radical involving whole uterus, cervix, upper vagina and parametrium. It can be performed by abdominal route, vaginal route or in the form of laparoscopically assisted vaginal hysterectomy and now the more recent form total laparoscopic hysterectomy which is more advanced than any one, is introduced and has no requirement of double setup[5,7].

Robotic hysterectomy is a variant of laparoscopic hysterectomy using special remotely controlled instrument that allow the surgeon finer control as well as three dimensional magnified vision[6].

Urethral injury is not uncommon, ranges between 2.2% to 0.03% depending on whether modality is abdominal, laparoscopic or vaginal[10] .

Several studies have found that osteoporosis and increased risk of bone fractures are associated with hysterectomies[11,12].

Our rationale of study is to audit the number of hysterectomies in a teaching hospital where the indications, procedure, route of operation and outcome varies according to the competency level. Also it would give an idea that what measures we should take in order to improve the outcome.

OBJECTIVES:

The aims of study are:

1. To make an audit of hysterectomies by either route in a teaching hospital.

2. To determine the morbidity and mortality associated with this procedure.

MATERIAL AND METHODS:

This retrospective collection of data was done at department of Obstetrics and Gynaecology, Independent University Hospital Faisalabad from 1-1-2006 to 31-12-2008. During this period, (75) seventy five patients data was collected who were admitted through outdoor or inpatient department who were fit into inclusion criteria.

All data available about these patients was evaluated in great detail regarding their age, parity, socioeconomic group. Indications and complications during this procedure. The time of surgery was estimated along with their postoperative hospital stay.

STUDY DESIGN:

Descriptive study.

INCLUSION CRITERIA:

All patients who underwent hysterectomy either by abdominal or vaginal route due to gynaecological indications were included in study.

EXCLUSION CRITERIA:

All patients who underwent hysterectomy due to some obstetric indications were excluded form study.

RESULTS:

A total of 75 patients underwent gynecological hysterectomies during 2006-2008 at Independent University Hospital Faisalabad. All the information is collected on predesigned proforma and different parameters were evaluated.

A total of 61 patients had abdominal hysterectomy and 14 patients had vaginal hysterectomy.

* About 50% patients were in the age range of 35-45, 32% were in 46-55 and 12% were above 55 years of age.
* About 60% patients have BMI between 25-30 and 30.6% were between 19-24. About 9.3% were above BMI 30.
* 49.3% were multiparous ladies having parity >5. 46.6% were Para 1-5. Only 4% were nulliparous patients.

In 27% cases abdominal hysterectomy was done due to fibroids. About 19% had bleeding from endometrial origin (BEO) 18% due to adenomyosis and 13% were chronic PID patients. 22% patients had vaginal hysterectomy due to uterovaginal prolapse.

The most common complication after abdominal hysterectomy was urinary tract infection in nearly 28% of cases ,about 26.6% had wound infection. 26% had primary hemorrhage or hematoma. Secondary hemorrhage was reported in 1.3% cases. The incidence of burst abdomen, thromboembolism, bladder injury was nearly 1-3%. There was no case of intestinal injury during surgery or postoperatively diagnosed. 1% patient had acute tubular necrosis of kidneys due to massive primary hemorrhage. Anaesthesia complication was noticed in 3-4% cases. The most common complication after vaginal hysterectomy was UTI .Hemorrhage either primary or secondary, wound infection, bladder injury all were in about 1-3% cases.

Mortality of patients was reported in 1.3%. One patient out of these 75 who underwent abdominal hysterectomy. The patient was hepatitis C positive with deranged liver function tests, went into DIC followed by death of patient.

Age (years)	NO.	Percentage(%)
35-45	42	56
46-55	24	32
Above 55	09	12
Total	75	100

Table 1.

BMI	No.	Percentage(%)
19-24	23	30.6
25-30	45	60.0
Above 30	07	9.30
Total	75	100

Table 2.

Parity	No.	Percentage(%)
Nulliparous	03	04
1-5	35	46.6
>5	37	49.3
Total	75	100

Table 3.

Type of anaesthesia	No.	Percentage(%)
Spinal	24	32
General	51	68
Total	75	100

Table 4.

Indication	Abdominal route (n)	Percentage(%)	Vaginal route (n)	Percentage(%)
Leiomyomas	17	27.0	0	0
DUB(BEO)	12	19.6	0	0
Benign ovarian cysts	05	8.1	0	0
Uterovaginal prolapse	0	0	14	22
CA cervix	01	1.6	0	0
CA endometrium	04	6.55	0	0
Chronic PID	08	13.1	0	0
Adenomyosis	11	18.03	0	0

Table5.

Length of stay (days)	Abdominal route (n)	Percentage(%)	Vaginal route (n)	Percentage(%)
< 5	05	6.6	09	12
5-10	43	57.3	03	04
More than 10	13	17.33	02	2.6

Table 6.

Length of Surgery (min)	Abdominal route (n)	Percentage(%)	Vaginal route (n)	Percentage(%)
<30	10	13.3	02	2.6
30 – 60	44	58.6	09	12
>60	07	9.33	03	04

Table 7.

Length of Surgery (min)	Abdominal route (n)	Percentage(%)	Vaginal route (n)	Percentage(%)
<30	10	13.3	02	2.6
30 – 60	44	58.6	09	12
>60	07	9.33	03	04

Table 7.

Statistical analysis:

All the results of study are analyzed by statistix 8.1. Chi-square test was used to analyze the results. Regarding complications during abdominal versus vaginal hysterectomy, Chi-square test was applied.

Overall Chi-Square	7.70
P-Value	0.6583
Degrees of Freedom	10

CAUTION: 12 cell(s) have expected values less than 1.0

Cases Included 22 Missing Cases 0

Regarding indications of abdominal versus vaginal hysterectomy, result of the chi-square was

Overall Chi-Square	72.00
P-Value	0.0000
Degrees of Freedom	7

Complications	Abdominal route (n)	Percentage(%)	Vaginal route (n)	Percentage(%)
Anesthesia complications	03	04	0	0
Per operative hematoma formation	02	2.6	01	1.3
Primary hemorrhage	03	04	01	1.3
Secondary hemorrhage	01	1.3	01	1.3
UTI	21	28	10	13.3
Wound infection	20	26.6	02	2.6
Bladder injury	02	2.6	01	1.3
Incisional hernia	02	2.6	0	0
DVT	01	1.3	0	0
Diabetic ketoacidosis	01	1.3	0	0
Burst abdomen	01	1.3	0	0

Table 8.

CAUTION: 4 cell(s) have expected values less than 1.0

Cases Included 16 Missing Cases 0

Discussion:

Gynaecological hysterectomy is an important and final treatment in many gynaecological conditions like fibroids, abnormal uterine bleeding, BEO, adenomyosis etc. It has lot of impact on quality of life in female. Oophorectomy is a usual procedure that is done along with hysterectomy due to many reasons. Patients may have post menopausal symptoms at a very young age that needs hormonal treatment. Psychological aspect of this procedure need due importance which is not met in our counseling sessions.

Proper counseling of this procedure is required which includes details of procedure, its complications, Indications and post operative effects on quality of life.

In our study, we have tried to collect data in newly formed teaching institution like Independent University Hospital which is serving very low socioeconomic community. The decision of this procedure was always made by senior consultants and different parameters were assessed before making this decision.

The most common age that underwent this procedure was around 40 in about 56% cases. About 60% patients had BMI between 25-30. It means obesity may be a factor in different gynaecological indications.

Most of hysterectomies were done by abdominal route (81.3%) while (18.66%) cases were done by vaginal route. These results are very similar to study of international journal of reproductive medicine 2014 showing (75.5%) hysterectomies done by abdominal route.[13]

Most common indication in our study was liomyomas (27%) DUB (19.6%) adenomyosis (18.03%) chronic PID (13.11%) ovarian neoplasm's (13%), Endometrial carcinoma (6.55%), cervical carcinoma (1.6%). Vaginal hysterectomy was done mostly due to uterovaginal prolapse (22%). These results are similar to another study in Pakistan in which most common indication was fibroid uterus (33%) and second commonest cause was uterovaginal prolapse (19%).[14]

In a recent study from Africa, results are different in a way that DUB precedes the uterovaginal prolapse.[15]

The complication rate in our study was high among abdominal route due to its increased percentage and large incision made in lower abdomen. The risks of hemorrhage, infection, post operative recovery and stay at hospital are all increased by

abdominal route. Otherwise it has an advantage of better approach, more surgical operative area that can be visualized properly. Also in case of adhesions, it is the safer approach as compared to vaginal.

The most common complication was UTI in nearly 28% of cases. Significantly high number of patients had wound infection 26% rest of complications were in 1-3% of cases like hemorrhage, bladder injury, burst abdomen and DVT. Cochrane review concluded that vaginal hysterectomy should be performed in preference to abdominal hysterectomy where possible. However in our opinion data should be analyzed carefully keeping in mind that hysterectomy to save life (for obstetric and malignant conditions) are done through the abdominal approach. These patients already are more prone to have more risk of medical diseases. Excluding these two major indications the rate of complications are comparable both by abdominal versus vaginal route[16]. Vaginal route needs more experience, skill and feasibility. The major difference is the duration of stay at hospital postoperatively and need of analgesia which is less required by vaginal route.

There is a concern among the medical and health policy makers that hysterectomy is routinely done by untrained doctors many times due to improper indications. Mostly they do surgeries by abdominal route so the incidence of complications is even more high now-a-days in spite of advancements in techniques.

According to magon etal. Hysterectomy is a surgery which has been used, misused,and overused at different times in gynecology.

Conclusion:

- As any surgical procedure is associated with a risk of complications, The indications should be carefully evaluated. It is prudent to discuss the other treatment remedies other that hysterectomy.
- Properly trained and experienced staff should be available during surgery.
- The risk of complications can be minimized by proper yearly audit of procedures.
- Vaginal hysterectomy has more promising results but it is reserved for specific indications.

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