MORBIDITY AND POSTOPERATIVE RECOVERY OF HYSTERECTOMY CASES

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ABSTRACT

Objective — *To compare morbidity and post-operative recovery in cases of abdominal and vaginal hysterectomies.*

Study design — *Comparative study.*

Place & Duration of study — *Gynecological and Obstetrics Unit II of Civil Hospital Karachi associated with Dow University of Health Sciences during the year 2008.*

Methodology — *All patients who underwent hysterectomies during the study period for gynecological indications were included. Data from these cases were extracted on a specially designed proforma which included fields for patient's age, uterine size, indication and route for hysterectomy, factors for pelvic adhesions, duration of surgery, intra operative blood transfusion, intraoperative and postoperative complications, pain, effective ambulation and discharge from hospital.*

Results — *There were a total of 107 cases in whom hysterectomy was performed. Out of this thirty three (29.46%) were vaginal hysterectomy (VH) cases and seventy four (69.64%) abdominal hysterectomy (AH) patients. Mean age was higher in cases of VH. Sizes of the uteri in cases of AH were bulky to greater than 14 weeks size while in VH were mostly atrophic (n 25).*

Main indications for AH were dysfunctional uterine bleeding (DUB) and fibroids however in VH all patients had uterovaginal prolapse with concomitant DUB in 12.13% of cases. Mean operative time was 117.45 minutes in VH as compared to AH where it was 102.84 minutes. Intraoperative hemorrhage and blood transfusions were more in VH (n 10 - 30.30%). In AH group 8(24.24%) patients received blood transfusions. Infections were seen more frequently in AH (n 25 - 36.13%) while urinary retention was noted in cases of VH only (n 3- 9.09%). Early effective ambulation, less pain and early discharge from the hospital were noted in VH group.

Conclusions — *Abdominal hysterectomy was performed more often. Operative time and blood transfusions were more in VH. However better postoperative outcome and early discharge was noted in the VH when compared to AH.*

Key words — *Abdominal hysterectomy, Vaginal hysterectomy, Morbidity.*

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INTRODUCTION:

Hysterectomy is a complete removal of uterus. With over 575,000 procedures done per year, hysterectomy is the second most common major operation performed in the United States.[1] The credit for first vaginal hysterectomy goes to Langenback in 1813.[2] The first total abdominal hysterectomy with

bilateral salpingo-oophorectomy was performed by Clay in 1844.[3]

Most studies have shown that VH is associated with fewer complications[4] shorter length of hospital stay, improved patients recovery,[5] and lower hospital charges than AH. The Centers for Disease Control evaluated surgical outcome in 568 VH and 1238 AH performed for benign gynecological disorders. The overall complication rate was lower with the vaginal approach (24.5 versus 42.8 per 100 hysterectomies) and the risks of infection and transfusion were twice as high for the AH group. These data need cautious interpretation as women undergoing AH may have had more severe disease.[6] Another study, comparing 471 women undergoing AH to 901 undergoing VH for similar indications, reported better outcomes after VH.[7]

The purpose of this study was to compare the morbidity and postoperative recovery in cases of AH and VH at public sector tertiary level hospital in Karachi.

METHODOLOGY:

This was a comparative study conducted at the Department of Obstetrics and Gynecology Unit II of Civil Hospital Karachi associated with Dow University of Health Sciences during the year 2008. All cases of abdominal and vaginal hysterectomy done for benign gynecological causes were included, while hysterectomies done for gynecological malignancies and obstetrical hysterectomies were excluded.

Data of selected patients were extracted by researchers on a specially designed proforma which included age, size of uterus, indication and route for hysterectomy, factors for pelvic adhesions (previous history of caesarean section, tubal ligation, pelvic surgery or puerperal sepsis), duration of surgery, intra operative blood transfusion, intra and postoperative complications, pain (asking for analgesics in addition to injection diclofenic potassium twice daily), effective ambulation (walking without attendant's support to attend toilet) and hospital stay after surgery.

Patients were counseled, confidentiality was ensured and informed consent was obtained. Data was analyzed by SPSS-version 15.0 for frequencies, means and standard deviations where appropriate.

RESULTS:

There were a total of 107 cases out of which 33 (29.46%) had VH and 74 (69.64 %) AH. The mean age of the patients in VH group was higher, size of the uterus in cases of AH was bulky to greater than 14 weeks size while in all VH group atrophic uteri were present in 25(75.70%) patients. Main indications for AH were dysfunctional uterine bleeding (DUB) and fibroids however in all VH uterovaginal prolapse was 100% with concomitant DUB in 4(12.13%) cases. Factors for pelvic adhesions in cases of AH were twice as high as in VH cases (table I). Intra-operative hemorrhage and blood transfusions were more in VH. Mean operative time (min) of AH was less than that of VH that is 102.84±18.84 vs 117.45±14.65. Ureteric injury occurred in a single case of AH (table II).

Postoperative hemorrhage occurred in a single case of VH and none in AH. Infections were more in AH and noted in 25(36.13%) cases, particularly wound infection. Urinary retention occurred only in VH cases, however gaseous abdominal distention and respiratory tract infection were noted, only in patients who underwent AH. Effective ambulation was achieved within 48 hours in 32(43.24%) cases of AH and 28(84.85%) cases of VH.

Postoperative pain assessed by asking for more doses of analgesic, was less with VH (3.03%) in comparison to AH (10.81%). Early discharges from the hospital (between 3-5 postoperative days) were noted in 31 cases (93.94%) of VH (table III).

DISCUSSION:

In the United Kingdom, the VALUE (Vaginal, Abdominal or Laparoscopic Uterine Excision) study included over 24000 AH and 11000 VH. The reported crude rates for severe intraoperative and postoperative complications were 3.6 and 0.9 respectively for former and 3.1 and 1.2 respectively for later procedure.[8] Urinary tract was damaged in 3/1000 cases after AH and 14/1000 cases in the vaginal route.[9] Ureteral injury occurred in 0.7-1.7% of AH and 0-0.1% of VH. [8] These are similar in our study that is 1.35% of AH and 0 % of VH. This difference is primarily due to the fact that an abdominal hysterectomy is often done in patients with extensive disease adjacent to the ureters, which places them at greater risk. In vaginal hysterectomy, unless there is complete procidentia, usually there is no distortion of the anatomy of the lower ureters.[10]

Bladder injuries occur in 1 to 2% of all hysterectomies commonly on bladder roof and reported to be 0.8% in AH and 1.6% in VH.[1,11] In this study there was no case of iatrogenic bladder injury. A study suggested routine use of cystoscopy during hysterectomy to identify any missed bladder injury.[12] Bowel injuries are uncommon. No gut related injury occurred in

Table I: Clinical Profile of the Study Sample

	Abdominal Hysterectomy	Vaginal Hysterectomy
Mean age	48.11±3.4	57.61±7.6
Size of the uterus n (%)		
Atrophic uterus	1 (0.014)	25 (75.75)
Bulky	20 (27.02)	4 (12.13)
8 – 14 weeks	32 (43.25)	4 (12.13)
> 14 weeks	21 (28.38)	0
Indications (More than one indication in some cases) n (%)		
DUB	30(40.54)	4(12.13)
Fibroid	28(37.24)	2(6.06)
Endometriosis	10(13.51)	0
Chronic PID	5(6.76)	0
Adenomyosis	10(13.51)	2(6.06)
UV Prolapse	1(1.35)	33(100)
Endometrial Polyp	2(2.70)	1 (3.03)
Others	3(4.05)	0
Pelvic adhesions	16 (18.85)	3 (9.09)

Table II: Intraoperative Assessment

	Abdominal Hysterectomy	Vaginal Hysterectomy
Intra-operative Complications n (%)		
Hemorrhage	2 (2.70)	10 (30.30)
Ureteric injury	1 (1.35)	0
Duration of surgery		
Mean time (mins)	102.84±18.84	117.45±14.65
Intra-operative blood transfusion n (%)		
Needed (units)	2(2.70)	8(24.24)

this study. However the reported incidence is 0.4 %.[13]

Significant intraoperative bleeding occurred in 2.3% of AH cases and 1.9% of VH and as reported AH 15% needed blood transfusion.[8,9] In our study intraoperative hemorrhage for AH was 2.70% but was much higher (30.30%) for VH, and therefore more blood transfusion was given to cases of VH. This was due to dissection of huge cystocoele as most of the cases were of complete procidentia. In a study from the USA, fever or infection rate after TAH was 30% and 15% after VH and this is comparable with our results.[9] The most serious postoperative complication is hemorrhage (0.2-2% of patients).[5] Bleeding usually originate at lateral vaginal angles and is amenable to vaginal resuturing in most cases.[14] In our study group, only one (3.03%) case had this complication which was managed conservatively. This was the case of VH.

Length of hospital stay was longer after AH (3.99+/- 1.16 days) than after VH (2.76+/- 0.94).[7] Another study concluded that mean hospital stay was

Table III: Post Operative Assessment

	Abdominal Hysterectomy	Vaginal Hysterectomy
Post-operative Complications n (%)		
Hemorrhage	0	1 (3.03)*
Urinary retention	0	3 (9.09)*
Stitch line Infection	5 (10.81)	1 (3.03)
Chest infection	5 (5.05)	0
UTI	15 (20.27)	5 (15.15)
Gaseous distention	10 (10.13)	0
*Responded to conservative treatment		
Post-operative Recovery n (%)		
Early ambulation	32 (43.24)	28 (84.85)
Post-operative pain	8 (10.81)	1 (3.03)
Discharge from hospital		
= 5 days	51 (68.92)	31 (93.94)
> 5 days	23 (31.08)	2 (6.06)
Mean (days SD)	5.73±2.360	4.48±2.438

significantly shorter for vaginal hysterectomy compared to abdominal hysterectomy (9.1 vs. 13.7 days, p <0.01).[5] Also in our study mean post operative hospital stay was also longer after AH.

Lower postoperative quality-of-life scores were found in the AH group when compared to the VH group in functional capacity, physical aspect, and pain.[16,17] In our study the VH and colporraphy to correct uterovaginal prolapse was associated with less pain and better mobility during the first 72 hours of the recovery period as compared to the abdominal approach. Comparing AH low blood levels of acute phase reactants in cases of VH demonstrates less tissue trauma, enabling them to return to their normal lives.[18] With accurate selection of patients and the route of hysterectomy, morbidity and mortality is low as suggested in one study.[19]

CONCLUSIONS:

Abdominal hysterectomy was the common procedure performed. The type of hysterectomy influenced the rate of complications. Lower complication rate was after vaginal hysterectomies. The amount of blood loss depended on the severity of altered pelvic anatomy and indication for hysterectomy. A better postoperative quality of life in terms of early ambulation, less need for analgesia and short hospital stay was noted in vaginal hysterectomy group.

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