



Comparative Study Of Abdominal Hysterectomy Versus Vaginal Hysterectomy for Nondescent Uterus

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Abstract: Hysterectomy is the removal of the uterus. It is one of the most common major gynecological operations performed each year in every country of the world. About 3.5 million women aged between 15 to 45 years had hysterectomy in the United States of America during 1970-1978 with an annual incidence of 800,000. In 1980 the hysterectomy rate was 7.6 per 1000 women aged 15 to 45 years. This may be achieved through abdominal & vaginal route. Once a proper indication for hysterectomy exists the gynecologist surgeon must decide whether to remove the uterus abdominally or vaginally. In the present study, a total number of 60 patients were analysed in the Begum Khaleda Zia Medical College and Shaeed Shurawardy Hospital, Dhaka. Study period was from May 2007 to December 2007. Among 60 patients, 30 were underwent vaginal hysterectomy and another 30 patients were underwent abdominal hysterectomy. Selection was done on randomly using different colored card in sealed envelop. The patients were cases of dysfunctional uterine bleeding, leiomyoma of uterus less than 12 weeks size of pregnancy, and adenomyosis. Diagnosis was made by clinical examination and ultrasonography. A comparative study was made between vaginal and abdominal hysterectomy in terms of operative time, blood loss during operation, per operative and post-operative complication, costs of operation and post-operative hospital stay. All these information was obtained by using the same data collection instrument for each case. Then the data analysis was done by using appropriate tests in the SPSS software package. Mean age and parity of patients in both groups were more or less similar. In both groups size of uterus was bulky in most cases. Indication of operation in abdominal hysterectomy was DUB (13.3%), fibroid < 12 weeks of pg (60%) and adenomyosis (26.7%). In case of vaginal hysterectomy both DUB and fibroid uterus < 12 weeks were (46.7%) and adenomyosis (13.3%). All the patients were given spinal anesthesia. Percentage of patients having adnexectomy was lower as prophylactic oophorectomy was done less frequently during vaginal hysterectomy. Operative time was less in vaginal hysterectomy and difference was significant ($p < .003$). Per operative blood loss and immediate post-operative pain were significantly lower in vaginal hysterectomy group. Costs of operation and hospital stay after operation were less in vaginal hysterectomy group and the difference was

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highly significant by using appropriate tests. Number of suture materials needed for operation was less in vaginal hysterectomy. The difference in per operative complication was not significant but those of post-operative complication were significant. So by comparing the above advantages of vaginal hysterectomy over abdominal hysterectomy, vaginal hysterectomy should be the first choice when one considers a hysterectomy.

Keywords: Clinical Profile, Short Term Post-Operative Outcome, Abdominal and Vaginal Hysterectomy, Indication.

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INTRODUCTION

Hysterectomy is the removal of the uterus. It is one of the most common major gynecological operation performed each year in every country of the world. About 3.5 million women aged between 15 to 45 years had hysterectomy in the United States of America during 1970-1978 with an annual incidence of 800,000 [1]. In 1980 the hysterectomy rate was 7.6 per 1000 women aged 15 to 45 years. This may be achieved through abdominal & vaginal route. Once a proper indication for hysterectomy exists the gynecologist surgeon must decide whether to remove the uterus abdominally or vaginally. The distinction between the two routes is now blurred due to the application of laparoscopic techniques to the procedure of hysterectomy. At present there exists a spectrum of hysterectomy procedures of varying invasiveness, with the traditional abdominal and vaginal hysterectomy at either extreme of the new spectrum [2]. The most common indication for hysterectomy whether abdominal or vaginal, is leiomyomatous uterus [3]. In 75% of cases, the abdominal approach is used despite being associated with longer hospital stay, increased complication and higher cost [1, 4, 5]. Important reasons for choosing an abdominal over vaginal approach include an enlarged uterus, less uterine descent or mobility; and history of surgery (e.g. caesarean section) [6, 7]. The sole exception to this is to management of uterovaginal prolapse for which the vaginal route is normally used, but indication accounts for only 10% of cases [5, 8, 9]. The available evidence shows that, since the widespread introduction of prophylactic antibiotics, vaginal hysterectomy is associated with less febrile, morbidity, less bleeding necessitating transfusion, shorter hospital stay and faster convalescence than abdominal hysterectomy [10]. There are distinct advantages to the patient when the hysterectomy is performed by vaginal route rather than by abdominal route [2, 11, 12]. Vaginal hysterectomy is an almost entirely extra-peritoneal operation. The peritoneum is opened only to a minimum extent and little packing of the intestines away from the operative field is necessary. Because there is less manipulation of the intestines, postoperative ileus is much less common than with abdominal

hysterectomy [2]. Avoidance of an abdominal incision also reduces the method and depth of anesthesia [2]. Postoperative, patients are able to ambulate earlier and care for themselves. The need for nursing care is reduced. Bowel functions return sooner and potential intravenous fluid therapy is minimized. There is less interference with pulmonary function. The incidence of postoperative infectious morbidity is less than half of that of abdominal hysterectomy [2], and the need of postoperative antibiotics is reduced as well as need for analgesics [2]. Vaginal hysterectomy patients are generally discharged from the hospital earlier [11]. Fewer postoperative adhesions develop after vaginal hysterectomy [11]. Vaginal hysterectomy is better tolerated by elderly patients and those with complicating diseases [12]. Extreme obesity increases the technical difficulty of both abdominal and vaginal hysterectomy, but technical difficulty is less with vaginal hysterectomy [12]. Needed repair of vaginal wall relaxations, if associated incidentally is easier with vaginal hysterectomy. Contraindications to vaginal approach exist and should be given proper consideration. Adnexal masses, diffuse endometriosis, chronic pelvic pain or any abdominal process that need concurrent evaluation or treatment at the time of hysterectomy, being beyond the field of exposure of vaginal route, is traditionally performed by means of abdominal approach [2]. Significant uterine enlargement is a relative contraindication to traditional vaginal hysterectomy. Various complementary methods have described that permit progressive reduction of the volume of the uterus during surgery. In this respect, laparoscopic intervention (LAVH) may be most useful, providing the surgeon with an overview of the shape of the uterus and the condition of the uterus before transvaginal coring or morcellation. Lack of uterine descent or null parity potentially making hysterectomy more difficult, does not stand as a general contraindication to vaginal hysterectomy. If the surgeon chooses hysterectomy to be unwise, laparoscopic intervention (LAVH) can prove indispensable in effecting the vaginal delivery of the uterus, so as it is appreciated that complete laparoscopic severance of the major support will be required to the scarred vesicouterine plane is

usually easier when the correct plane can be entered where it is least scarred (i.e. Toward the vagina) and the dissection extended up along this plane toward the area of maximal scar [2]. Therefore, the decision regarding the correct approach will depend on the technical skill and experience of the surgeon, the size of the uterus and a careful assessment of certain patient parameters. A study challenging the generally accepted contraindications to vaginal hysterectomy indicates that a large uterus (\geq week's size), nulliparity, previous caesarean delivery, and pelvic laparotomy rarely constitute contraindications to vaginal hysterectomy. Experienced vaginal surgeons report overall vaginal hysterectomy for benign conditions from 77% to 88% [14]. Despite the overwhelming evidence in favor of vaginal hysterectomy, it is not a preferred route for hysterectomy in undescended uterus in Bangladesh. The reason for this practice may be lack of controlled evidence in favor of vaginal hysterectomy in our country. The objective of this study is to undertake comparative study of abdominal hysterectomy versus vaginal hysterectomy for nondescend uterus.

METHODOLOGY

Type of study: Randomized controlled trial.

Case: Patients with menstrual disturbance who underwent nondescend vaginal hysterectomy.

Control: Patients with menstrual disturbance who underwent abdominal hysterectomy.

The patient's profile in relation to age, parity, menopausal (hormonal) status, associated medical ailments, (e.g. hypertension, cardiovascular disease, Diabetes mellitus, Obesity, Bronchial asthma, chronic renal impairment), previous surgery (e.g. caesarean section, pelvic laparotomy, appendectomy) were compared between the two groups.

Place of study: Department of Obstetrics & Gynecology, Begum Khaleda Zia Medical College and Shaheed Suhrawardy Hospital, Sher-E-Bangla Nagar, Dhaka, Bangladesh.

Sample size: 60 patients (30 in each group).

Sampling: Sixty patients fulfilling the inclusion and exclusion criteria were included in the study and were divided in two groups on random basis using color cards in sealed envelopes.

Study period: 8 months (May 2007 to December 2007).

Inclusion Criteria:

- Patients with Dysfunctional uterine bleeding (DUB).
- Fibroid uterus <12 weeks of pregnancy.
- And Adenomyosis.

Exclusion Criteria:

- Uterus more than 12 weeks size.
- Uterine prolapse.
- Endometriosis.
- Adnexal mass.
- Pelvic inflammation.
- Vaginal stenosis.
- Any malignancy.

METHODS

May 2007 to December 2007, total 60 patients were included in this study. Patients having dysfunctional uterine bleeding, uterine fibroid (<12 weeks pregnancy size) & adenomyosis were selected for the study. For data collection, a predesigned data collection instrument was developed for each of this patient. Detailed history of patient with particular attention to operative time, preoperative & post-operative complication, number of suture material needed for operation, amount of blood loss, post-operative hospital stay and cost of operation were recorded in this data collection sheet. Out of 60 patients, 30 patients were allocated for vaginal and 30 for abdominal hysterectomy. Spinal anesthesia was given to all patients. Vaginal hysterectomy was performed by technique described before, by using dexton "1" in all cases. Abdominal hysterectomy was performed by traditional method using Pfannenstiel incision. Stumps were closed by dexton "1", parietal peritoneum chromic Catgut "1-0", rectus sheath by dexton "1" and skin was closed by subcuticular suture with vicryl "2-0".

Blood loss was measured by weighing blood soaked wet mops and same size dry mops. Difference of weight between two reflected the estimated blood loss. Number of suture materials needed for each patient was recorded. Any preoperative complication was noted by the surgeon and was taken immediately for the management. Daily pain score assessment for the immediate postoperative period (day-0, day-1) was done by LINEAR VISUAL ANALOGUE SCALE (LVAS) of 1-10 cm, increasing with severity with pain. VAS provides simple, efficient and minimally intrusive measurement of pain intensity which has been used widely in the clinical research setting where a quick index of pain is required and to which a numerical value can be assigned. It consists of 10 cm horizontal line with two end points labeled "no pain & worst pain ever". The patient is asked to place a mark on the 10 cm line at a point which corresponds to the

level of pain intensity she presently feels. The distance 1 centimeter from the lower end of the VAS to the patient’s mark is used as a numerical index of severity of the pain. Duration of postoperative hospital stay was also recorded. Postoperative pyrexia was a temperature of ≥ 38 degree celcius on two or more occasions, excluding the first twenty four after operation. Urinary tract infection was defined as $\geq 10^5$ organism/ml in a midstream specimen of urine or a catheter specimen of urine if the patient is catheterized whether symptoms are present or not. Wound infection was indicated by serous or purulent discharge from the incision site or whether there is erythema or indurations with/without fever. Length of hospital stay was defined as the period from the day of operation to the discharge from the hospital. At discharge all patients were instructed immediately to contact in case they have any problem. A cost of operation was

calculated by the amount of money needed for buying suture materials and other necessities during operation.

Data Analysis:

Data collected from each individual subject was compiled and analyzed using computer based software, the Statistical package for Social Science (SPSS). For statistical analysis “t” test π^2 test were used.

RESULTS

Statistically analysis was done to compare the characteristics and variables of 30 patients in whom vaginal hysterectomy were performed (Group I) with those of 30 patients in whom abdominal hysterectomy were performed (Group II).

Table-1: Mean age and Parity of the patients (N=60)

Parameter	Group-I Abdominal Hysterectomy (mean±sd)	Group-II Vaginal Hysterectomy (mean±sd)	P value
Age(years)	43.07±4.96	44.87±3.31	0.104
Parity	3.73±0.35	3.8±.29	.068
Number of suture materials (mean±sd)	53.43±0.57	5.20±0.18	<0.184

The mean age of the patients for abdominal Hysterectomy was 43.07±4.96 years and that for vaginal Hysterectomy was 44.87±3.31 years. The difference is statistically insignificant (p=0.104) in student 't' test. The mean parity of the patients who underwent abdominal Hysterectomy was 3.73±0.35 and that for vaginal Hysterectomy was 3.8±.29. The mean difference is statistically not significant

(p=.068) student 't' test. The mean number of suture materials used for the abdominal Hysterectomy was 5.43±0.57 and that for vaginal Hysterectomy was 5.201±0.18. The mean suture material used was less in case of vaginal Hysterectomy but the difference is not statistically significant (p>.05) in unpaired't' test (Table-1).

Table-2: Indication for Hyterectomy (N=60)

Indications	Group-I Abdominal Hysterectomy N=30 (%)	Group-II Vaginal Hysterectomy N=30 (%)	P value
Dysfunctional uterine Bleeding (DUB)	4(13.3)	14(46.7)	.199
Fibroid less than 12 weeks size	18(60.0)	12(40.0)	
Adenomyosis	8(26.7)	4(13.3)	

Among 30 patients who underwent abdominal Hysterectomy Group-1 13.3% were due to dysfunctional uterine bleeding, 60 % for fibroid uterus less than 12 weeks size ad 26.7% for adenomyosis. Out of 30 patients of vaginal

Hysterectomy were (46.7%) due to dysfunctional uterie bleeding and (40%) for fibroid uterus. whereas only 13.3% cases were for denomyosis. The difference is statistically not significant (p=.199) in chi square test (Table-2).

Table-3: Type of operation (N=60)

Type of operation	Group-I Abdominal Hysterectomy N (%)	Group-II Vaginal Hysterectomy N (%)
Hysterectomy alone	4(13.3)	26(86.67)
Hysterectomy with unilateral salpingo oophorectomy	10(33.33)	3(10.0)
Hysterectomy with bilateral salpingo-oophorectomy	16(53.34)	1(3.33)

Table-3 show that through abdominal rout 13.3%, patients underwent abdominal Hysterectomy alone, another 33.33% were treated with abdominal Hysterectomy along with unilateral salpingo oophorectomy and 53.34% with bilateral salpingo-oophorectomy. Through vaginal rout 86.67% underwent vaginal hysterectomy and another 13.33% had vaginal hysterectomy along with unilateral or bilateral salpingo- oophorectomy (13.33%).

Table-4: Size of the uterus (N=60)

Size of the uterus	Abdominal Hysrectomy N (%)	Vaginal Hysterectomy N (%)
Normal size	4(13.3)	8(26.7)
Bulky	8(26.7)	12(40.0)
8 weeks size	-	4(13.3)
10 weeks size	-	4(13.3)
12 weeks size	-	2(6.7)

Among the patients who underwent vaginal Hysterectomy, most patients (40%) had bulky uterus, rest had uterus 6:2 week size. About 13.3%

patient of abdominal hysterectomy group had normal sized uterus, bulky uterus was present in 26.7%, rest had uterus 6-12 week size (Table-4).

Table-5: Operative time and blood loss during operation (N=60)

Procedure	Abdominal Hysrectomy N (%)	Vaginal Hysterectomy N (%)	p-value
Operative time (minute)	52.2±3.68	48.00±6.38	0.003
Blood loss(ml)	169.60±10.70	95.00±8.51	0.001

The mean operative time for abdominal Hysterectomy was 52.2+3.68 minutes and for vaginal Hysterectomy were 48.0116.38 minutes. The time difference is statistically significant (p>.05) (unpaired't' test). Per operative blood loss for abdominal hysterectomy was 169.60 10.70 (ml) and 95.00 8.51 (ml) for the vaginal hysterectomy. The blood loss is more in abdominal hysterectomy during operation and difference was highly significant (p<.001) in unpaired't' test (Table-5).

Table-6: Per-operative complication (N=60)

Per operative complication	Abdominal Hysrectomy N (%)	Vaginal Hysterectomy N (%)	p- value
Hemorrhage	6(20.0)	4(13.3)	0.238
Slippage of ligature	0(0.0)	2(6.70)	
Bladder injury	0(0.0)	0(0.0)	
No complication	24(80.0)	24(80.0)	

Table-6 shows different per operative complications between two groups. Per operative complication for both the procedures were similar

except slippage of ligature which occurred in two patients during vaginal procedure. The difference is not statistically significant.

Table-7: Post-operative complications (N=60)

Post-operative complication	Abdominal Hysterectomy N (%)	Vaginal Hysterectomy N (%)	p-value
Fever	4(13.3)	2(6.7)	.005
UTI	3(10)	0(0.0)	

Haematuria	0(0.0)	0(0.0)	
Per vaginal bleeding	0(0.0)	2(6.67)	
Wound infections or dehiscence	1(13.33)	0(0.0)	
Pelvic hacmatoma/abscess	1(3.33)	2(6.67)	
No complication	18	24	

Table-7 shows that the post-operative complications were less in vaginal hysterectomy compared to abdominal hysterectomy and the

difference is statistically significant ($p < 0.005$) in chi square test.

Table-8: Post-operative course (N=45)

Post-operative course	Abdominal Hysterectomy N (%)	Vaginal Hysterectomy N (%)	p-value
Need for additional analgesic (Tramadol NSAID)	26(86.7%)	19(63.3%)	<0.05*
Requirement of IV fluid (litre)	3.26±0.14	2.31±0.15	<0.001**
Return to oral diet (hours)	32.2±8.7	21.1±2.2	<0.001**
Ambulation (hours)	30.2±3.1	18.4±4.3	<0.001**

Table-8 shows postoperative course of the patients' undergone abdominal hysterectomy and vaginal hysterectomy. On the day of operation, patients of both groups received injection pathedine 75 mg plus injection stemetil one ampoule IM. Need for additional analgesic in abdominal hysterectomy and vaginal hysterectomy was 87.7% and 63.3%

respectively. Patients with vaginal hysterectomy required significant less i.v. fluid (2.31±0.15 L VS 3.26±0.14, $p < 0.001$); return to oral diet earlier (21.14±2.2 VS 32.2±8.7, $p < 0.001$) and had early ambulation (18.4±4.3 VS 30.2±3.1, $p \text{ value} < 0.001$). All the differences were statistically significant.

Table-9: Blood Transfusion Needed (N=10)

Procedure	No of patient needed transfusion N (%)	p-value
Abdominal Hysterectomy	8(26.66)	0.037
Vaginal Hysterectomy	2(6.66)	

Table-9 shows the percentage of patients who needed blood transfusion. It is less invaginal Hysterectomy group (6.66%) Which those of

abdominal hysterectomy group (26.66%). The difference is statistically significant ($p > 0.037$).

Table-10: Postoperative Hospital stay.

Type	Hospital stay (days) mean±sd	p-value
Abdominal Hysterectomy	6.67±1.95	<0.001
Vaginal Hysterectomy	4.87±0.82	

Hospital stay after vaginal hysterectomy is less (4.87±0.82 days) in comparison to abdominal hysterectomy (6.67±1.95 days) and the difference is

statistically highly significant ($p < 0.05$) in unpaired 't' test (Table-10).

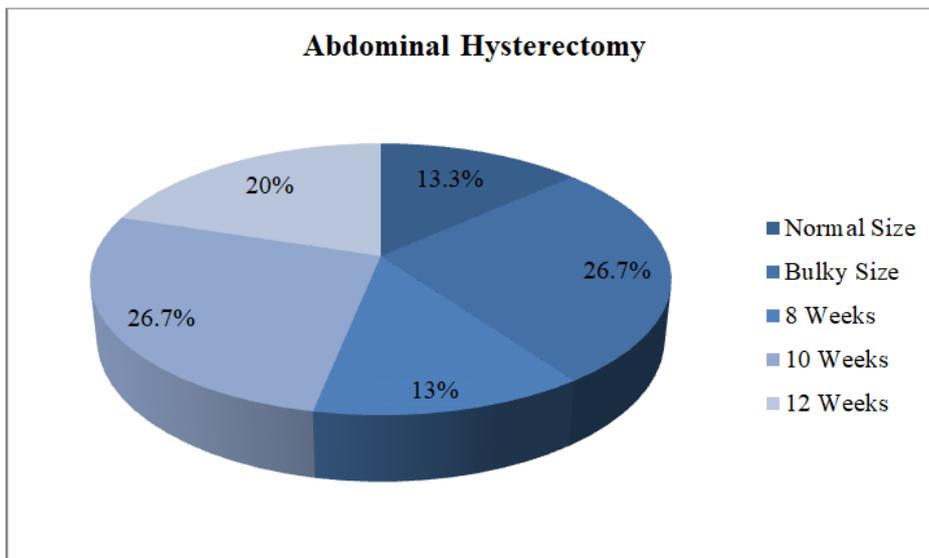


Figure-1: Size of Uterus Abdominal Hysterectomy (Percentage).

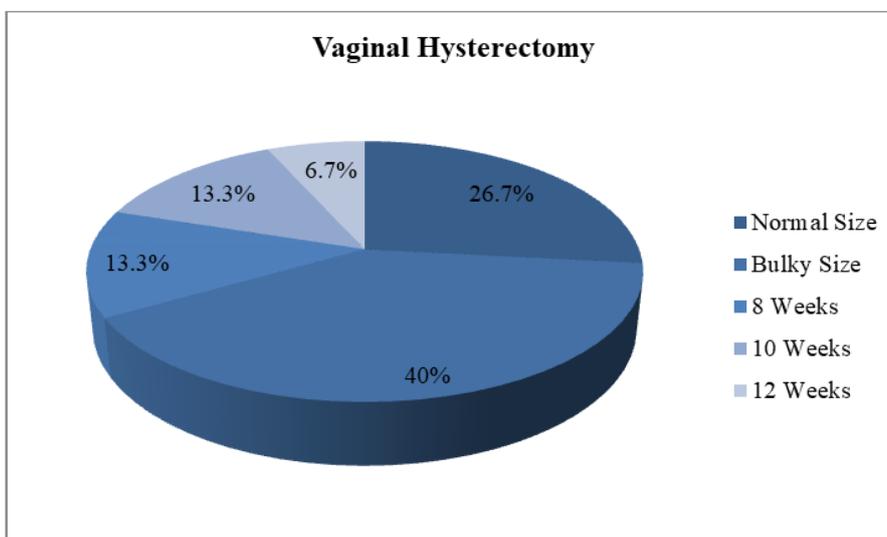


Figure-2: Size of Uterus Vaginal Hysterectomy (Percentage).

DISCUSSION

The study was designed to compare abdominal hysterectomy versus vaginal hysterectomy for nondescend uterus. The mean age and parity were similar in both groups. Maximum patients underwent hysterectomy for fibroid uterus in abdominal hysterectomy (60%) and 40% in vaginal hysterectomy. So uterine enlargement even up to 12 weeks of pregnancy size was not a contra indication for vaginal hysterectomy. The same was observed in the studies of Adam Magos [15], Benassi *et al.*, [17] and Hoffman [18]. We have included only the patients having uterus less than 12 weeks of pregnancy size. But in a study done by Adam Magos [15] and Shirsh S. Sheth [16] enlarged uterine up to 18 to 20 weeks size were removed vaginally by using various methods like bisection, coring, myomectomy and morcellation. In this study only

myomectomy was done as a procedure to reduce the size of the enlarged uterus, size of the fibroid can be reduced by preoperative hormonal manipulation with GnRH analogues. Patients having ovarian pathology were excluded from this study. Prophylactic oophorectomy was done in 13.3% patients in vaginal hysterectomy without any difficulty. The percentage is lower than abdominal hysterectomy group which reflects the paradox that most gynecologists consider prophylactic oophorectomy at abdominal hysterectomy but almost routinely leave the ovaries in place in vaginal hysterectomy, Shirsh S. Sheth [16] in his study showed 94% successful oophorectomy at vaginal hysterectomy. According to him the prerequisites for vaginal oophorectomy includes: Tubo-ovarian relation, easy access to the tubes & mobile ovaries, efficient retraction & lighting. Experience of surgeon

at vaginal surgery. The feasibility of adnextomy may be judged by thorough preoperative pelvic examination and diagnostic laparoscopy. Among our cases, two cases of serous cystadenoma of ovary were found incidentally during operation. Bilateral salphingo oophorectomy was done in both cases without difficulty. So an adnexal mass should not be considered as a contra-indication for vaginal approach. All the patients of both groups were operated under spinal anesthesia due to the institutional practice. The mean number of suture materials used in vaginal hysterectomy is less but the difference is not significant. The mean operating time for Vaginal Hysterectomy was 48.00 ± 3.68 minutes. The finding was similar in the studies of Benassi [17] and Al Hoffinn [18], showing less time consumption in vaginal hysterectomy. The operative time varied with size of the uterus and concomitant adnextomy. The estimated blood loss in vaginal hysterectomy is significantly lower than abdominal hysterectomy resulting in lower percentage of blood transfusion required following vaginal hysterectomy. This phenomenon coupled to the fact that the anatomical relationship between the uterine vessels and vaginal vault remains relatively constant irrespective of uterine size means that it is logical to ligate the main blood supply of uterus from below and early during a vaginal hysterectomy rather than from above and late during abdominal hysterectomy. The percentage of preoperative complications was similar in both groups. There were no major complications like ureteric injury, small bowel injury, or bladder injury during surgery by any route. Ligature had slipped during operation in two cases of vaginal hysterectomy groups, which was managed promptly by vaginal route. We did not convert from vaginal to abdominal route. In any case, the immediate post operative (day one, day two) pain scores were found to be significantly higher in abdominal hysterectomy group, which had profound effect on postoperative outcome like need for analgesic and ambulation. Ambulation was also delayed in abdominal hysterectomy. As more or less gut handling occurred in abdominal hysterectomy her return to oral diet was delayed compared to vaginal hysterectomy ($p < 0.001$). It increased the demand for I'V fluid. Post operative complications were fewer in vaginal hysterectomy group compared to abdominal hysterectomy. The abdominal operations had a higher incidence of fever, UTI and wound infection. The findings were similar with those of the Benassi *et al.*, [17], Hoffman [18] studies. The complications like pelvic hematoma or vaginal cuff hematoma were present in their series. In this study, total expenditure of vaginal hysterectomy is significantly lower than that abdominal hysterectomy. The reduction of cost may be due to less post-operative complications

necessitating less medication, lower percentage of blood transfusion and finally the decreased hospital stay. The study of Benassi [17] also proved that vaginal hysterectomy is less costly, Kunj [19] and Steege obtained data from state of California for 38000 abdominal hysterectomy and 16000 vaginal hysterectomies across all indication for vaginal hysterectomy. The length of hospital stay was one day shorter and average patient costs were about more than \$2000 less for vaginal hysterectomy. Kunj and Steege [19] estimated that a 10% shift from abdominal hysterectomy to vaginal hysterectomy would save approximately 7.5 million dollars in hospital cost alone. In present study the difference in length of hospital stay after operation (for vaginal hysterectomy 4.87 ± 10.82 days vs. 6.67 ± 1.95 days for abdominal hysterectomy) was highly significant ($p < 0.001$) due to delayed ambulation, delayed return to oral diet, howel handling and more post-operative discomfort in abdominal hysterectomy. More patients who underwent vaginal hysterectomy were satisfied with the outcome and their quality of life in the immediate postoperative period.

Limitations of the Study

The sample size was not so large. For better outcome, comparatively large quantity data should be handled for more conclusive information. If we desire to understand about hysterectomy thorough abdominal versus vaginal route, the period of duration i.e. admission to discharge from hospital is not quite enough time to compare within comparison with patient's total life span after operation. We do believe that a detailed time span and close follow-up is necessary to include more logical information.

CONCLUSIONS

The conclusions of my study were:

- Operative time needed for vaginal hysterectomy is significantly lower (48.00 ± 6.38 min in Vaginal hysterectomy as 52.20 ± 3.68 min in Abdominal hysterectomy).
- Vaginal hysterectomy is associated with less per operative blood loss (95.00 ± 8.51 ml in Vaginal hysterectomy 169.60 ± 10.70 ml in Abdominal hysterectomy).
- There is no significant difference of intra operative complications between abdominal and vaginal hysterectomy.
- Immediate post-operative pain is significantly lower and post-operative period is relatively smoother in vaginal hysterectomy in comparison to abdominal hysterectomy (immediate post-operative pain scores were 7.66 ± 1.28 in Vaginal

hysterectomy 5.027 0.93 in Abdominal hysterectomy in day 1).

- Significant reduction in postoperative complications was observed in vaginal hysterectomy (39.99, in abdominal hysterectomy 20.01% in vaginal hysterectomy.).
- The unique advantage of vaginal hysterectomy is earlier recovery of patients resulting less hospital stay and reduced cost of operation.

The observations suggest that vaginal hysterectomy for nondescend uterus is beneficial to the patient in contrast to abdominal hysterectomy in terms of intraoperative and postoperative complications. Postoperative stay and economy.

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