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Research Article

Abdominal versus vaginal hysterectomy in non-descent cases

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ABSTRACT

Background: Hysterectomy is the most frequently performed elective major operation in gynaecology by vaginal and abdominal route. Gynaecologic surgeons worldwide said that two are not competitive procedures but each one has its own place in the operative armamentarium. Present study is done to comparative risks of complications in abdominal route versus vaginal route of hysterectomy in intra operative and post-operative periods.
Methods: It's a retrospective study was done from Dec 2013 - Dec 2014 for a period of one year in 82 women who had undergone hysterectomy, divided as group A with abdominal hysterectomies (44 cases) and group B with vaginal hysterectomies (38). Information on the indications, operative procedures, and complications were noted and analyzed.
Results: Intra-operative blood loss, mean operating time was more in group A than in group B. The mean duration of surgery in group B was 76 ± 12 min and that of group B was 101 ± 14 min. The mean blood loss was also more in case of group A than that of group B (219 ml vs. 172 ml). Bladder injury occurred in 1 case in group B (3%) and in 3 cases in group B (7%). Ureter injury occurred in 1 (2%) case in group A. Postoperative fever (20% & 8%), UTI (13% & 11%) and wound infection (10%, 0%). Only one patient underwent relaparotomy for internal bleeding via abdominal route was more common in group A as compared to group B. Only one patient underwent re-laparotomy for internal bleeding via abdominal route.
Conclusions: Study results conclude that patients requiring hysterectomy for benign non prolapse cases be offered the option of vaginal route which is quicker recovery, early mobilization, shorter hospitalization, less operative and post-operative morbidity, more economical and effective.

Keywords: Vaginal hysterectomy, Abdominal hysterectomy, Post-operative complications

INTRODUCTION

Hysterectomy is the most frequently performed elective major operation in gynaecology.[1] It is known that abdominal hysterectomy is undoubtedly the most popular than that of vaginal route but two are not competitive procedures, each has it's own place. It was the introduction of laparoscopic hysterectomy in particular, that has ignited the comparison between different routes and techniques[2] because laparoscopic hysterectomy has more complications like major hemorrhage, hematoma, ureteric injury, bladder injury, and anaesthetic complications when compared to abdominal and vaginal hysterectomies.

Hysterectomy by vaginal route must be practiced where there is an indication for hysterectomy in benign non prolapse cases.[3,4] The vaginal route has mainly been restricted to the treatment of uterine prolapse, but it can be followed in all cases because fewer post-operative

complications, no abdominal incision ,hence cosmetically approved by patient which allows earlier recovery and return to work.[5] Hence it is interest of the patient that vaginal route must be in main line. Numerous case series reviews have supported the fact that there is significant reduction in complication rate in vaginal route than abdominal and recommended vaginal route as the primary route.[5,6]

Here we aims at studying 90 cases of non-descent cases comparing between vaginal route versus abdominal route of hysterectomy in terms of intra operative and post-operative complications were disease confined to the uterus.

METHODS

The study was carried out at Konaseema hospital and research foundation over a period of one year from Dec 2013 - Dec 2014. A total of 82 cases admitted to gynecological ward requiring hysterectomy for benign diseases were selected randomly and divided into two groups according to the type of surgery. In group A, 44 patients were subjected to Total Abdominal Hysterectomy (TAH) and in group B another 38 patients subjected to Vaginal Hysterectomy (VH).

Inclusion criteria: Women in any age group who underwent vaginal or abdominal hysterectomy for benign conditions were included in the study uterus without descent, with good mobility and size not more than 16 weeks size.

Exclusion criteria: Women who underwent hysterectomy for uterine prolapse, associated adnexal pathology, history of 2 or more serial abdominal surgeries or pelvic organ surgeries and indications that would generally require an abdominal approach such as endometriosis, pelvic inflammatory disease were excluded from the study. Vaginal hysterectomy was done in those with uterine size ≤14 weeks, unrestricted uterine mobility.

A careful history from the patient was taken included complete physical as well as pelvic examination. Routine investigations including complete haemogram, urine analysis, blood grouping and Rh-typing, blood sugar, serum creatinine, blood urea, cervical swab for culture and sensitivity, Pap smear, ECG, Chest X-ray/USG abdomen and pelvis, HIV, HCV, HBSAg was done.

A written consent was taken from all patients after explaining the procedure. Institutional ethical committee approval was taken before study.

Every patient was completely evaluated by an anesthetist before deciding the type of anesthesia. Spinal anesthesia was used in most of our patients. Operating time for Abdominal Hysterectomy was calculated from the start of skin incision to the closure of the skin incision and for vaginal hysterectomy from the start of incision at cervico-vaginal junction to the placement of vaginal pack. Blood loss was calculated by noting the number of mops used during surgery. On an average ¼ soaked mops contained 20 ml, ½ soaked 40 ml and fully soaked 100 ml. This is rough estimation of blood loss.

Intra-operative complications like injury to the bladder/bowel/ ureter. Haemorrhage was noted.

Post operatively, all patients were meticulously followed. On 3rd post-operative day, routine hemoglobin estimation and urine examination was done and vaginal swab taken on 4th postoperative day and subjected for culture and sensitivity.

In case of abdominal wound infection, culture and sensitivity was done to know the type of organisms. Post-operative complications like fever, urinary tract infection, vaginal cuff cellulitis, abdominal would infection were noted.

All the patients were advised to attend the outpatient department two weeks after discharge from hospital to note their well-being or any late complications like vaginal discharge, urinary/bowel symptom

Statistical analysis was done using SPSS software version 15. Mean and standard deviation was calculated and P value was considered significant when P ≤0.05.

RESULTS

From one year study period 82 cases were operated in which 44 cases of abdominal hysterectomies and 38 cases were vaginal hysterectomies.

Table 1: Age distribution in groups.

Age interval (years)	Abdominal (%)	Vaginal (%)	Total (%)
30-39	12 (27%)	11 (29%)	23 (28.5%)
40-49	15 (34%)	18 (47%)	33 (40%)
50-59	14 (31%)	5 (13%)	19 (23%)
>60	3 (6%)	4 (10%)	7 (8.5%)
Total	44	38	82 (100%)

Table 2: Mean ages in both groups.

Group	Mean ± SD
Abdominal hysterectomy	42.8 ± 7.9
Vaginal hysterectomy	42.2 ± 7.3

't' = 0.61; P value >0.05

In age distribution of majority of subjects are of age between 40-49 years i.e. with 40%. There is no significant age difference between 2 groups.

Table 3: Parity wise distribution.

Parity	Abdominal (%)	Vaginal (%)	Total (%)
Nulli-P1	2 (4.5%)	3 (7.5%)	5 (6.5%)
P 2-P4	20 (45.5%)	20 (52.5%)	40 (48.5%)
P5- P7	22 (50%)	15 (39%)	37 (45%)
Total	44	38	82 (100%)

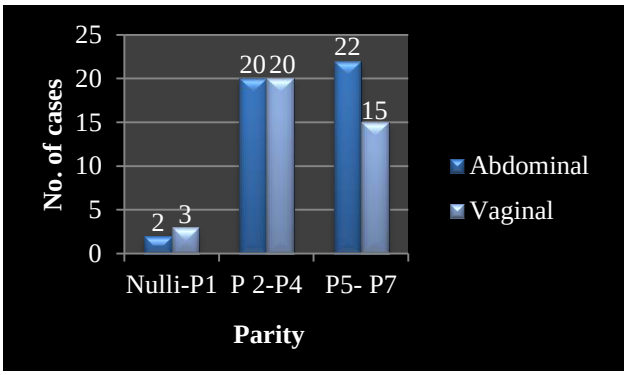

Figure 1: Showing parity wise distribution.

In study group 6 % were nulliparous women, 94% were multiparous women.

Table 4: Indications for hysterectomy in groups.

Indications for hysterectomy	Abdominal	Vaginal	Total
Adenomyosis	4 (10%)	4 (10.5%)	8 (10%)
DUB	25 (56%)	19 (50%)	34 (41%)
Fibroid uterus	13 (29%)	14 (37%)	27 (40%)
Post-menopausal bleeding	2 (4%)	1 (2.5%)	3 (4%)
Total	44	38	82 (100%)

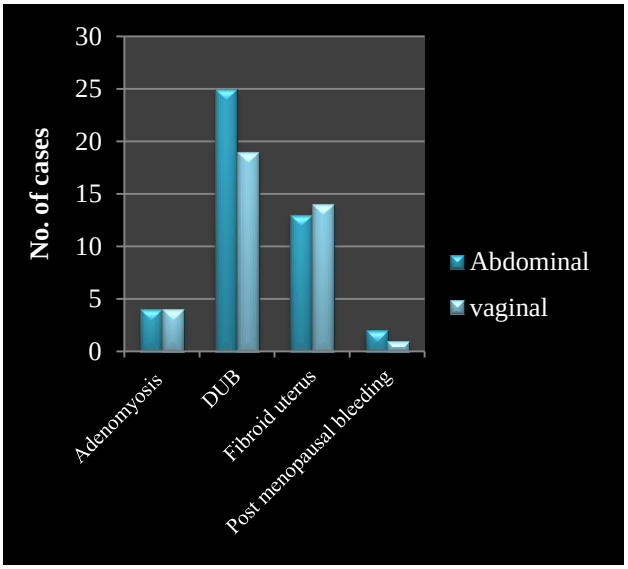

Figure 2: Showing indications for hysterectomy.

Most of the cases who are undergoing hysterectomy are indicated in DUB patients (41%) and next with fibroid (40%).

Table 5: Duration of surgery and blood loss in hysterectomy.

	Abdominal (Mean ± SD)	Vaginal (Mean ± SD)	t value	P value
Duration of surgery (minutes)	101.2 ± 14.34	76 ± 12.89	9.87	<0.0001*
Blood loss (ml)	219 ± 51.17	172 ± 44.21	5.14	<0.0001*

<0.0001* P-value is significant in terms of duration of surgery and blood loss

Table 6: Post-operative complications.

Post-operative complications	Abdominal hysterectomy	Vaginal hysterectomy
Wound infection	4 (10%)	0
Paralytic ileus	2 (4.5%)	0
Fever	9 (20%)	3 (8%)
UTI	6 (13%)	4 (11%)
Bladder injury	3 (7%)	1 (3%)
Ureter injury	1 (2%)	0
Rectus sheet hematoma	1 (2%)	0
Abdominal burst	1 (2%)	0
Secondary sutures	2 (4.5%)	0
Relaprotomy	1 (2%)	0
No complications	16 (36%)	30 (78%)

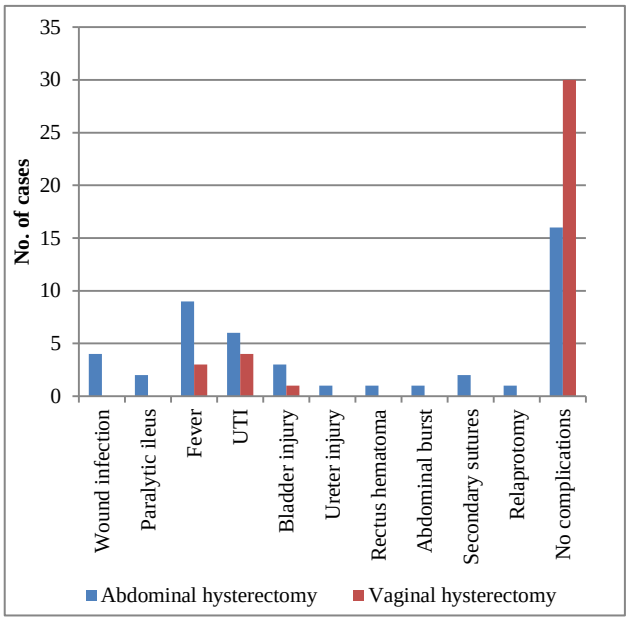

Figure 3: Showing post-operative complications.

Vaginal hysterectomy have 78% no complications were as abdominal have 38%.

Table 7: Recovery after hysterectomy.

	Abdominal	Vaginal	t value	P value
Length of analgesic usage (days)	9.8 ± 2.1	6.2 ± 1.23	12.94	<0.001*
Hospital stay (days)	9.5 ± 2.42	7.9 ± 1.23	7.98	<0.001*

Length of analgesic usage and hospital stay are significantly low in vaginal hysterectomy than abdominal hysterectomy.

DISCUSSION

Most of hysterectomies done for benign conditions are through abdominal route because of inadequate technical skills, presence of uterine enlargement makes vaginal route difficult. But with newer techniques, it should be followed in practice in interest of patients care. In our study most of patients were in the age group of 40-49 years of age which was well compared with the study carried out by Tariq Miskry et al.[7] and S Bharatnur et al.[8] (Table 1). Study has more of multiparous women parity which is similar to Nasira et al.[9] study (Table 3). Cases are indicated mostly for DUB (41%) and fibroid (40%) which is similar with Antony Davies et al.[10] and Raymond C et al.[11] (Table 4).

In our study duration of surgery is 101 min in abdominal hysterectomy and 76 min in vaginal hysterectomy i.e. difference of 25 min which is nearly similar with Dorsey et al.[12] showed that duration of surgery was 30 minutes longer for total abdominal hysterectomy than for vaginal hysterectomy.

A study by Aniuliene et al.[13] showed that significantly higher blood loss was observed during abdominal hysterectomy (308.5 ml) as compared to vaginal (195.3 ml), which is comparable to our results as 219 ml in abdominal and 172 ml in vaginal .which is not correlating with abdominal surgeries (Table 5).

Our study has Study shows that overall post-operative complications are more in abdominal hysterectomy group than in vaginal hysterectomy which is similar to S Bharatnur et al.,[8] (Table 6). Whereas studies by Harris et al.[14] and Taylor et al.[15] showed bowel injury, bladder injury and ureter injury higher in abdominal hysterectomy group than vaginal hysterectomy group, correlates well with our study.

The hospital stay was longer in abdominal hysterectomy in our study (Table 7). This finding is consistent with the study done by Consultant et al.[16] Lambaudie et al.[17] compared in an observational study the rate of complications and the duration of the hospital stay between abdominal, vaginal and laparoscopic assisted vaginal hysterectomy. The complication rates were no different but the hospital stay was significantly longer for patients who had undergone abdominal hysterectomy. Study showed that in the postoperative period, there was a higher demand for analgesics is significant (P <0.001) in the abdominal group when compared to vaginal group which is similar to study of Benassi et al.[18]

Contraindications for vaginal hysterectomy were usually considered as: nulliparity, history of pelvic surgery and excessive uterine size. However, practices are changing. Vaginal hysterectomy has been reported by several authors as an effective and safe procedure regardless of these contraindications,[19,20] The vaginal technique is regarded by many gynaecologists as the most cost-effective.[12] Vaginal hysterectomy performed as a 24-hour day case procedure appears to be as safe as traditional inpatient management.[21] Hysterectomy by abdominal route is correlated with much higher incidence of intestinal adhesions than other techniques.[22]

CONCLUSION

Patients without uterine prolapse can be operated by vaginal hysterectomy for the treatment of benign disease. Vaginal hysterectomy is associated with quicker recovery, early mobilization, and shorter hospitalization, less operative and post-operative morbidity when compared to abdominal hysterectomy. Vaginal hysterectomy is minimal invasive route, safe and effective procedure for benign non-prolapsed cases.

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