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ORIGINAL ARTICLE

A comparative analysis of vaginal hysterectomy and abdominal hysterectomy for enlarged uterus

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ABSTRACT:
Background: The most common elective major surgery in gynecology is a hysterectomy, either abdominal or vaginal, total or subtotal laparoscopic aided vaginal hysterectomy. The present study was conducted to compare vaginal hysterectomy and abdominal hysterectomy for enlarged uterus. **Materials & Methods:** 60 women with enlarged uterus were divided into 2 groups of 30 each. Group I patients underwent total abdominal hysterectomy and group II patients underwent vaginal hysterectomy. Parameters such as parity, weight of uterus, size of uterus, indication, blood loss and contraindications etc. was recorded in both groups. **Results:** Indicationfor hysterectomy was adenomyosis in 4 and 2, fibroids in 11 and 13, endometrial hyperplasia in 10 and 8 and endometrial polyp in 5 and 7 patients in group I and II respectively. The size of uterus was <12 weeks in 21and 25, >12 weeks in 9 and 5 patients. Parity was Nuli-P1 was 8 and 5, P2-P4 in 15 and 17 and P5-P7 in 7 and 8 patients. The weight of was 100-150 grams in 12 and 14, 150-200 in 8 and 9 and 200-250 in 10 and 7 patients. Intra-operative blood loss was 200-300 ml in 14 and 18 and 300-500 ml in 16 and 12 patients. Operative time was <1 hourin 21 and 16 and >1 hour in 9and 14 patients respectively. The difference was significant (P< 0.05).Complications were bowel injury in 1 and 2, ureteric injury was 0 and 1, urinary tract infectionin 0 and 1 and re- laparotomyin 1 and 2 patients in group I and II respectively. The difference was non- significant (P> 0.05). **Conclusion:** Hysterectomy by vaginal route is possible in cases with enlarged uterus due to benign condition up to 14 weeks after proper case selection and use of bulk reducing techniques like bisection, myomectomy, morcellation, and coring. Vaginal hysterectomy is a safe and effective procedure for cases of moderately enlarged uteri.
Keywords: abdominal, uterus, vaginal

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INTRODUCTION

The most common elective major surgery in gynecology is a hysterectomy, either abdominal or vaginal, total or subtotal laparoscopic aided vaginal hysterectomy.[1] The two treatments are thought to have their own place in the gynecologist's operational arsenal rather than being in direct competition with one another.[2,3] When weighed against the three options, vaginal hysterectomy ought to be the preferred method; laparoscopic assisted vaginal hysterectomy (LAVH) should only be used as a last resort due to its lengthy operating duration, high cost, and lack of further benefits in terms of reduced postoperative problems.[4]

Although the vaginal method has grown more convenient for enlarged uteruses, the abdominal route is still recommended for moderately enlarged uteruses due to treatments like morcellation, bisection, and coring.Using the vaginal method can assure a quicker recovery and decrease postoperative morbidity.[5]Many gynecologists believe that large uterine size is contraindicated for vaginal hysterectomy; nevertheless, procedures such as bisection, myomectomy, intramyometrial coring, and morcellation can make this possible. Nulliparity and prior cesarean sections are two more prevalent restrictions taken into account for vaginal hysterectomy procedures.[6] Surgical skill and cautious operating methods can, however, overcome these. Consequently, there is a need for a resurgence of vaginal hysterectomy, which is a less invasive, safe, and economical procedure that has fewer side effects and ought to be chosen whenever possible.[7]The present study was conducted to compare vaginal hysterectomy and abdominal hysterectomy for enlarged uterus.

MATERIALS & METHODS

The present study was conducted on 60 women with enlarged uterus. All were informed regarding the study and their written consent was obtained.

Data such as name, age, etc. was recorded. Patients were divided into 2 groups of 30 each. Group I patients underwent total abdominal hysterectomy and group II patients underwent vaginal hysterectomy. Parameters such as parity, weight of uterus, size of uterus, indication, blood loss and contraindications etc. was recorded in both groups. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Parameters	Variables	Group I	Group II	P value
Indication	Adenomyosis	4	2	0.74
	Fibroid	11	13	
	Endometrial hyperplasia	10	8	
	Endometrial Polyp	5	7	
Size of uterus (weeks)	<12 weeks	21	25	0.02
	>12 weeks	9	5	
Parity	Nuli-P1	8	5	0.94
	P2-P4	15	17	
	P5-P7	7	8	
Weight of uterus (gm)	100-150	12	14	0.05
	150-200	8	9	
	200-250	10	7	
Intra-operative blood loss (ml)	200-300	14	18	0.81
	300-500	16	12	
Operative time (minutes)	<1 hour	21	16	0.05
	>1 hour	9	14	

Table I shows that indication for hysterectomy was adenomyosis in 4 and 2, fibroids in 11 and 13, endometrial hyperplasia in 10 and 8 and endometrial polyp in 5 and 7 patients in group I and II respectively. The size of uterus was <12 weeks in 21 and 25, >12 weeks in 9 and 5 patients. Parity was Nuli-P1 was 8 and 5, P2-P4 in 15 and 17 and P5-P7 in 7 and 8patients. The weight of was 100-150 grams in 12 and 14, 150-200 in 8 and 9 and 200-250 in 10 and 7 patients. Intra-operativeblood loss was 200-300ml in 14 and 18 and 300-500 ml in 16 and 12 patients. Operative time was <1 hour in 21 and 16 and >1 hour in 9 and14 patients respectively. The difference was significant (P< 0.05).

Table II Assessment of complications

Complications	Group I	Group II	P value
Bowel injury	1	2	0.83
Ureteric injury	0	1	
Urinary tractinfection	0	1	
Re-laparotomy	1	2	

Table II shows that complications were bowel injury in 1 and 2, ureteric injury was 0 and 1, urinary tract infectionin 0 and 1 and re- laparotomy in 1 and 2 patients in group I and II respectively. The difference was non- significant (P> 0.05).

DISCUSSION

Abdominal hysterectomy is the most widely performed technique worldwide and accounts for 66% of cases, while vaginal hysterectomy and laparoscopic hysterectomy account for 22% and 12% of cases respectively.[8] With the advent of laparoscopic hysterectomy, minimally invasive surgeries have come to the limelight. Vaginal hysterectomy is associated with lesser morbidity, early ambulation, reduced hospital stay, and reduced cost when compared to abdominal hysterectomy and laparoscopic hysterectomy.[9] Despite the advantages of vaginal hysterectomy, abdominal hysterectomy is still the most commonly performed technique worldwide, being associated with increased complications, higher costs, and longer hospital stay.[10]

We found thatindicationfor hysterectomy was adenomyosis in 4 and 2, fibroids in 11 and 13, endometrial hyperplasia in 10 and 8 and endometrial polyp in 5 and 7 patients in group I and II respectively. The size of uterus was <12 weeks in 21and 25, >12 weeks in 9 and 5 patients. Parity was Nuli-P1 was 8 and 5, P2-P4 in 15 and 17 and P5-P7 in 7 and 8 patients. The weight of was 100-150 grams in 12 and 14, 150-200 in 8 and 9 and 200-250 in 10 and 7 patients. Intra-operative blood loss was 200-300 ml in 14 and 18 and 300-500 ml in 16 and 12 patients. Operative time was <1 hour in 21 and 16 and >1 hour in 9 and 14 patients respectively. Cosson et al[11]underwent hysterectomy for benign disorders. Pre-operative and early postoperative complications were recorded for the 1248 vaginal hysterectomies (8%), 190 laparoscopically assisted vaginal hysterectomies (12%), and 166 abdominal hysterectomies (10%). None of the patients died. There were 15 bladder (0.9%) and one ureter injury (0.06%) with no significant difference between routes. Intestinal injuries (0.6%) overall were more common when laparotomy was performed (2.4%). In 45 patients (2.8%), bleeding exceeded 500 ml. The rates were vaginal hysterectomy (2%, P<0.001), laparotomy (6.7%), and laparoscopy (5.3%). The overall reoperation rate of 0.8% does not differ with the type of the procedure.

We observed thatindicationfor hysterectomy was adenomyosis in 4 and 2, fibroids in 11 and 13, endometrial hyperplasia in 10 and 8 and endometrial polyp in 5 and 7 patients in group I and II respectively. The size of uterus was <12 weeks in 21 and 25, >12 weeks in 9 and 5 patients. Parity was Nuli-P1 was 8 and 5, P2-P4 in 15 and 17 and P5-P7 in 7 and 8 patients. The weight of was 100-150 grams in 12 and 14, 150-200 in 8 and 9 and 200-250 in 10 and 7 patients. Intra-operative blood loss was 200-300 ml in 14 and 18 and 300-500 ml in 16 and 12 patients. Operative time was <1 hour in 21 and 16 and >1 hour in 9 and14patients respectively. Taylor et al[12]compared intraoperative and postoperative complications of abdominal hysterectomy for the enlarged, myomatous uterus with vaginal hysterectomy with morcellation.Medical records of 139 patients who underwent vaginal hysterectomy with morcellation and 244 patients who underwent total abdominal hysterectomy for an enlarged, myomatous uterus were reviewed.There were no significant differences between the two groups in surgical or anesthetic risk factors (P>.05). Operative time was similar between the groups (P>.05). Length of hospital stay was increased significantly with total abdominal hysterectomy (mean, 3.9 days vs 2.6 days; P<.001). Perioperative complications were increased with the abdominal route (10% vs 25%, P<.001).

We observed that complications were bowel injury in 1 and 2, ureteric injury was 0 and 1, urinary tract infection in 0 and 1 and re- laparotomy in 1 and 2 patients in group I and II respectively. Hoffman et al[13] compared the intraoperative and postoperative complications of transvaginal morcellation and abdominal hysterectomy for the removal of moderately enlarged uteri.There were 50 patients in the vaginal group and 112 in the abdominal group. At a p value < 0.05 there was no statistically significant difference between the two groups for age, parity, obesity, hypertension, insulin-dependent diabetes mellitus, or prior genitourinary surgery. The mean operative time in the vaginal hysterectomy group was 122 minutes and in the abdominal hysterectomy group 148 minutes ($p < 0.05$). The mean estimated blood loss was 527 and 586 ml, respectively (not significant). Twenty-two percent of the vaginal group and 70% of the abdominal group underwent bilateral oophorectomy ($p < 0.05$). The mean uterine weights were 335 and 336 gm, respectively (not significant). The mean day of starting a regular diet was 2.1 and 3.6, respectively ($p < 0.05$). The mean day of discharge was 3.6 and 5.1, respectively ($p < 0.05$). Complications were similar for the two groups.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that hysterectomy by vaginal route is possible in cases with enlarged uterus due to benign condition up to 14 weeks after proper case selection and use of bulk reducing techniques like bisection, myomectomy, morcellation, and coring. Vaginal hysterectomy is a safe and effective procedure for cases of moderately enlarged uteri.

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