

Non-Descent Vaginal Hysterectomy Versus Total Abdominal Hysterectomy-A Case Control Study

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Abstract:

Background: Hysterectomy is the commonest major operation performed by gynaecologist through various approaches and techniques including vaginal, abdominal, laparoscopic and robotic hysterectomy. Vaginal hysterectomy offers lesser complications during intra and post-operative period in comparison to abdominal hysterectomy. Vaginal route for non descent uterus is acceptable method of hysterectomy in selected cases and with the help of debulking technique it becomes easier in large size uterus also.

Objectives: The aim of the study was to explore safety and efficacy of non-descent vaginal hysterectomy in comparison to abdominal hysterectomy.

Methods: This prospective case -control study was carried out in Faridpur Medical College Hospital, Faridpur, Bangladesh from May 2016 to April 2017. A total 150 cases with an indication of hysterectomy were selected of which 50 underwent non descent vaginal hysterectomy and rest 100 underwent total abdominal hysterectomy. Main outcome measures were: time taken to complete operation, estimated blood loss, need of blood transfusion, complications and length of hospital stay.

Results: No significant association was found between age and parity. Commonest indication was dysfunctional uterine bleeding in non descent vaginal hysterectomy and fibroid was the most common indication for total abdominal hysterectomy. Patients of non descent vaginal hysterectomy group were operated with minimal blood loss, in lesser duration in comparison to patients operated by abdominal hysterectomy. Post-operative complications were more in abdominal hysterectomy like febrile morbidity (12%), wound infection (7%), UTI (6%), respiratory infection (8%) and paralytic ileus (6%) which was significantly higher than non descent vaginal hysterectomy. Faster recovery was observed in group of non descent vaginal hysterectomy.

Conclusions: Non descent vaginal hysterectomy offers several benefits over abdominal surgery in terms of less intra-operative blood loss, less febrile morbidity, low postoperative complications, faster recovery, less hospital stay. So, non descent vaginal hysterectomy should be the choice of operation in selected cases.

Keywords: Hysterectomy, Non-descent vaginal hysterectomy, Total abdominal hysterectomy.

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I. Introduction

Hysterectomy is the most common major gynaecological operation performed by the gynaecologist. There are many indications for hysterectomy and uterus can be removed by a variety of techniques and approaches including abdominal, vaginal route or laparoscopic. ¹ Abdominal hysterectomy remains the predominant method of uterine removal. But now we know that abdominal exploration is always comparatively a major surgery than the vaginal exploration and the significant complications like paralytic ileus, incisional hernia, infection etc. are significantly less with vaginal route. ^{2,3} So abdominal route is used for malignancies, bulky uterus or when there are adhesions and when removal of uterus is not possible through vaginal route. ⁴ Now a day's laparoscopic surgeries are becoming popular due to less morbidity, lesser hospital stay, early resumption of physical activities, more cosmetic, less post operative pain. But at the same time costly, not available in all the centres, longer operative time and need skilled personnel. ² Vaginal hysterectomy being the oldest approach, is the signature operation of the gynaecologic profession. It is usually performed for

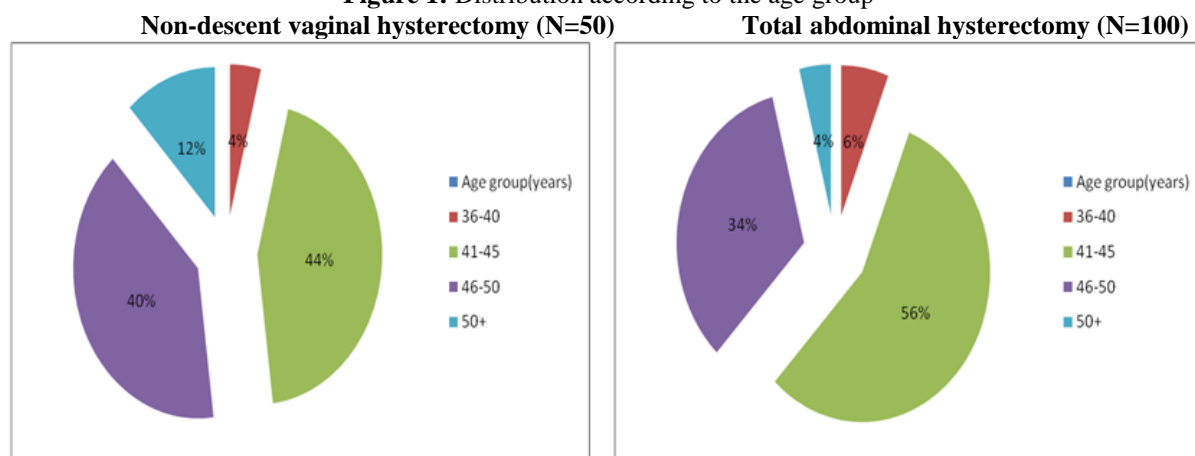
prolapsed uterus but with the advancement and expertise in techniques vaginal route has also been used for the removal of non-descended uterus (known as non-descent vaginal hysterectomy).³ Criteria such as the uterine size, mobility, accessibility and the pathology confined to the uterus are mostly the incorporating factors for non-descent vaginal hysterectomy.⁴ Non descent vaginal hysterectomy in large fixed uterus can be facilitated by bisection, myomectomy, wedge debulking , coring and clamp less approach.⁵ This procedure has less operative time, early recovery, less pain, scar less, less morbidity and early resumption of activity.⁶ The aim of this study was to explore the feasibility and safety of non descent vaginal hysterectomy over total abdominal hysterectomy.

II. Methods

This prospective case-control study was carried out in Faridpur Medical College Hospital, Faridpur, Bangladesh. The study was performed over a period of one year from May 2016 to April 2017. A total of 150 cases with an indication of hysterectomy were selected of which 50 were selected for non descent vaginal hysterectomy (NDVH) and rest 100 for total abdominal hysterectomy (TAH). Simple random sampling technique was used for selection of desired samples according to inclusion criteria. Indications for total abdominal hysterectomy (TAH) were uterine size more than 14 weeks, endometriosis, presence of adnexal mass,unexplained pelvic pain, suspected malignancy. Selection criteria for non descent vaginal hysterectomy (NDVH) were uterine size not exceeding 14 weeks gravid uterus, dysfunctional uterine bleeding, adenomyosis, no previous pelvic surgery and adequate vaginal access with good uterine mobility. Detailed history including patient’s age, parity, weight, menstrual history and presenting complaints were noted. A complete general, physical and pelvic examination was performed. Required preoperative investigations were done. A pre-operative ultrasonography was done to assess the size of the fibroid and any adnexal pathology. All patients were counselled about the disease and surgical procedure they had to undergo .The consent for conversion of NDVH to TAH (if needed) was also taken. Data regarding duration of operation, estimated blood loss, need of blood transfusion, complications, length of hospital stay, post operative hemoglobin and follow-up were collected.

III. Results

Figure 1: Distribution according to the age group



*P Value 0.472

Table 1: Distribution according to parity

Parity	Non-descent vaginal hysterectomy		Total Abdominal hysterectomy		P value
	No	%	No	%	
1-2	1	2	4	4	0.632
3-4	27	54	47	47	
>4	22	44	49	49	
Total	50	100	100	100	

Table 2: Indications of hysterectomy

Indications	Non-descent vaginal hysterectomy		Total Abdominal hysterectomy		P value
	No	%	No	%	
Fibroid	10	20	64	64	0.039
DUB	27	54	28	28	
Adenomyosis	6	12	2	2	
Adnexal mass	0	00	4	4	
Myomatous polyp	3	6	0	00	
Endometrial hyperplasia	4	8	2	2	

Table 3: Intraoperative and postoperative observations

Variables	Non-descent vaginal hysterectomy	Abdominal hysterectomy	P value
Duration of surgery (min)	48.6±5.25	68.2±4.45	0.001
Blood loss (ml)	189.1±10.26	247.7 ±8.53	0.001
Pain score on day 3 (cm)	1.80±0.11	2.88 ±0.65	0.001
Ambulation (days)	1.38±0.41	2.48 ±0.81	0.002
Duration of hospital stay (day)	3.1±0.23	7.1 ±0.63	0.001
Postop Hb (gm%)	10.1±1.22	7.89 ±2.46	0.001

Table 4: Distribution of postoperative complications

Postoperative complications	Non-descent vaginal hysterectomy		Abdominal hysterectomy		P value
	No	%	No	%	
Febrile morbidity	3	6	12	12	0.013
Wound infection	1	2	7	7	
UTI	1	2	6	6	
Respiratory infection	1	2	8	8	
Paralytic ileus	0	00	6	6	
Vaginal discharge	1	2	1	1	
Vault haematoma	0	00	1	1	

IV. Discussion

It is a well-known fact that 70-80% of the hysterectomies done for benign conditions are performed abdominally while vaginal hysterectomy is usually performed for the uterine prolapsed.⁷ The reason being inadequate technical skills, presence of uterine enlargement and less vaginal space. But with the newer techniques like bisection, morcellation and myomectomy, vaginal hysterectomy has become easy to perform even in enlarged uterus. In the present study, no significant association was found between age and parity as similarly observed by Deshpande et al.⁸ and Benassi et al.⁹ Similar study by Rupali D et al.¹⁰ included 50 cases of non-descent vaginal hysterectomy out of which 54% of the patients were in the age group of 41 to 45 years and 46% patients who had undergone Non-descent vaginal hysterectomy were para 3 or more. Though higher parity and advancing age are the favourable factors for vaginal hysterectomy but no statically significant association was found. The commonest indication for non descent vaginal hysterectomy was DUB followed by fibroid uterus and adenomyosis which was also compatible with Banarsee Bhadra et al study.⁹ In this study, most of the non-descent vaginal hysterectomy needed 48.6 minutes, comparatively faster operating technique resulted in shorter hospital stay and less post-operative morbidity which is comparable to the study conducted by Neerja G et al.¹¹ showed maximum cases of Non-descent vaginal hysterectomy were operated for fibroid uterus (47%), DUB (19%), adenomyosis (5%) and endometrial hyperplasia (4%). A similar study performed by Rupali D et al. showed fibroid as the most common indication for Non-descent vaginal hysterectomy (68%). Singh A and colleagues found, fibroid as a most common indication for hysterectomy in both the groups.¹²

In present study, it was observed that one case (2%) of frank vaginal vault infection was noted in NDVH group whereas 7 patients (7%) with frank wound infection who underwent TAH and was compatible with Razia Iftikar and Sunanda Bharatnur et al study.^{13,14} It was noted that 3 (6%) patients in non-descent vaginal hysterectomy while 12 (24%) patients in abdominal hysterectomy were febrile in the postoperative period and it was agreement with Abrol et al.¹⁵ In non-descent vaginal hysterectomy one patient developed UTI and one patient had RTI during postoperative period and was compatible with Razia Iftikar and Sunanda Bharatnur et al study.^{13,14} One patient of non-descent vaginal hysterectomy was re-admitted following complaints of vaginal discharge on her first follow up visit. In the abdominal hysterectomy, 6 (6%) patients had UTI, 8 (8%) had RTI and 6 (6%) had paralytic ileus in the postoperative period. No case of paralytic ileus was reported in Non-descent vaginal hysterectomy group. One patient in abdominal hysterectomy was admitted with complaints of vaginal bleeding. The pelvic ultrasound showed a vaginal vault haematoma of size 3x3 cm which was managed conservatively and one patient of TAH group was admitted with complaints of vaginal discharge and was compatible with Iftikar R et al and Bharatnur S study.^{13,14}

V. Conclusion

It was concluded that non-descent vaginal hysterectomy is associated with less blood loss during surgery, quicker recovery, and early mobilization, less operative and less postoperative morbidity when compared to abdominal hysterectomy. Minimal intraoperative manipulation and the avoidance of an abdominal wound is a remarkable advantage of non-descent vaginal hysterectomy especially for obese, elderly and medically debilitated patients. Length of hospital stay is significantly less for non-descent vaginal hysterectomy when compared to abdominal hysterectomy. Non-descent vaginal hysterectomy is a less invasive technique with shorter hospital stay and faster convalescence.

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