

Non Descent Vaginal Hysterectomy: Does Simple Technique Modification Increases the Success Rate

Gupta Pratiksha

Abstract

Background: Vaginal surgery is the true hallmark of the specialty of Gynecology. Non descent vaginal hysterectomy is a more skilled procedure and has a learning curve, but nevertheless can be measured provided the correct approach and technique is adopted. *Aim:* Increasing surgeon's expertise for Non descent vaginal hysterectomy. *Materials and Methods:* A total of 250 women admitted in PGIMSR and GMCH with benign condition indicated for hysterectomy, from July 2005 to June 2012. Non descent vaginal hysterectomy was done using two methods one is coring and other by placement of hemi uterus inside the peritoneal cavity after bisection of the uterus. *Results:* Placement of hemi uterus inside the peritoneal cavity after bisection of the uterus and coring definitely added to successful surgery. Out of 250 patients 246 had successful outcome. *Conclusions:* Vaginal hysterectomy should be the "gold standard" for the surgical removal of the uterus. Simple technique modification will definitely add extra-boon to the methodology used.

Keywords: Benign; Uterus Bisection; Vaginal Hysterectomy.

Introduction

Hysterectomy is the commonest procedure performed in Gynecology [1]. Traditionally various routes for

removal of uterus have been used. Abdominal hysterectomy is undoubtedly the most popular with 70:30 ratio for abdominal versus vaginal route. Now it is well known that hysterectomies could be performed easily, faster, with least complications and with excellent patient recovery when the vaginal route is used. Vaginal surgery is the true hallmark of the specialty of Gynecology. Non descent vaginal hysterectomy is a more skilled procedure and has a learning curve, but nevertheless can be measured provided the correct approach and technique is adopted.

Methods

The Study group included 250 women admitted in institute in department of obstetrics and gynaecology for hysterectomy, for benign Gynecological condition. Surgery was done under anesthesia in operation theatre. Study period was from July 2005 to June 2012. Successful outcome was achieved in 246 women out of 250 women who participated in the study. Ethical Committee approval was not required as technical feasibility of the procedure was decided at the time of surgery.

Patient is positioned in high dorsal lithotomy position in stirrups to obtain adequate exposure. Care was taken to pad the pressure points and avoid hyper flexion or extension of the legs, so that there is no risk of neurologic injury. A bimanual examination pelvic examination was performed to confirm the findings of the office examination, to assess adnexa, uterine size, mobility and descent. A weighted speculum was placed into the posterior vagina and a retractor was placed anterior to the cervix.

*Professor, Dept. of
Obstetrics and Gynecology,
PGIMSR, ESIC,
Basaidarapur,
New Delhi, India.

Pratiksha Gupta,
Professor, Post Graduate
Institute of Medical
Sciences and research
ESIC, Basaidarapur,
Ring Road, New Delhi-
110015.
E-mail:
drpratiksha@gmail.com

The anterior and posterior lips of the cervix were grasped by two cat's paw retractor or one double toothed tenaculum. Indwelling catheterization was done in all women. A hemoconstrictive agent that is 20 units vasopressin in 100ml saline was injected into cervical, paracervical and submucosal tissue to reduce intraoperative blood loss. A circumferential incision is then made at the cervico-vaginal junction. The vaginal epithelium is dissected sharply to the parietal peritoneum, which is entered sharply. Using heavy Mayo scissors, the posterior cul-de sac is entered sharply, and the peritoneum similarly identified. Uterosacral and cardinal ligaments are then clamped and ligated. Thereafter uterine vessels are clamped and ligated; care is taken to incorporate the anterior and posterior leaves of the visceral peritoneum. If uterus is enlarged, uterine morcellation may be considered only after ligating the uterine arteries. Morcellation is done for uterine enlargement, uterine fixation, cervical obstruction, and limited vaginal exposure. Uterus bisection, Lash Intramyometrial coring, myomectomy and wedge debulking is effective morcellation technique to facilitate removal of the enlarged uterus.

In bisection technique Uterus is bisected in midline starting from cervix below (Figure 1), and going up towards fundus of the uterus. Bisection starts either anteriorly that is from the anterior lip of the cervix, or posteriorly from the posterior lip. Complete bisection is done till fundus of the uterus (Figure 1 and 2).

If required other morcellation technique mentioned above can be used as we have used coring in enlarged uterus more than 14 weeks of uterine size. After the uterine vessels have been divided, the myometrium can be circumferentially incised with a scalpel placed parallel to the long axis of the uterus and beneath the serosal covering of the uterus. In effect, coring converts a spherical structure into an elongated rod shape, enhancing the surgeon's ability to facilitate uterine removal.

After the uterus is completely bisected and sufficiently reduced in size (Figure 2), one half of the uterus is pushed gently inside the peritoneal cavity after holding its cut surface by long tenaculum through the introitus so it does not slip away (Figure 3). It is much easier now to clamp and ligate tubo-ovarian vessels of the second half of the uterus which is lying outside the introitus. After ligating, cutting, this half of the uterus, this hemi transected uterus is delivered out. The first part of hemi uterus which was inside the peritoneal cavity is now pulled outside and similar operative technique is used to complete the hysterectomy. Vault is then sutured. We have done uterus bisection in our institute with success in 246

out of 250 patients. Four patients required laparotomy due to slipping of uterine artery at the time of surgery.

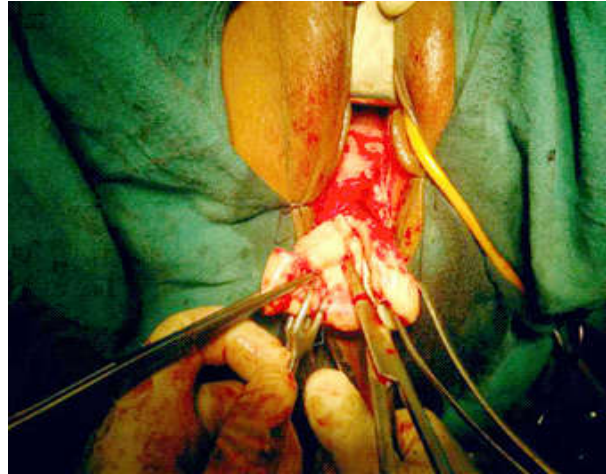


Fig. 1: Anterior and posterior lips of cervix being bisected in midline, in 2 parts, figure shows bisection being done from below upwards to reach the fundus of the uterus

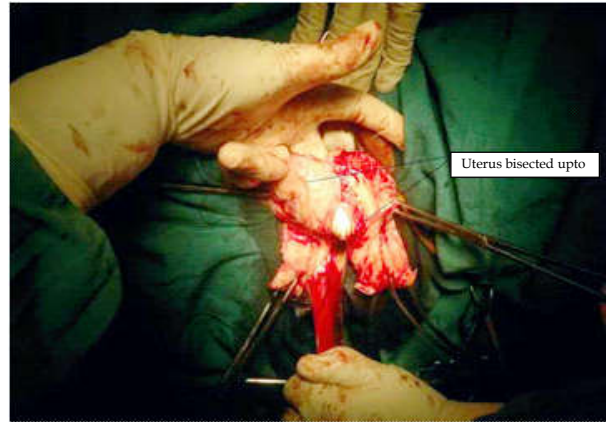


Fig. 2: Complete hemi section of uterus being done, Fundus of uterus cut into two parts

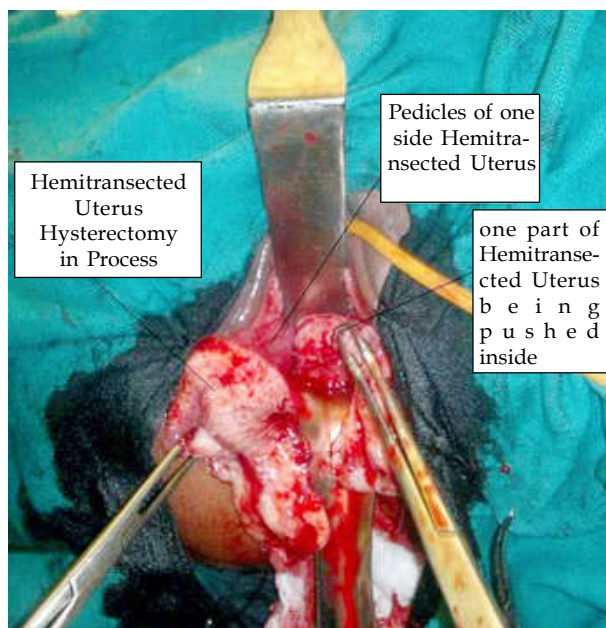


Fig. 3: One part of uterus pushed inside the peritoneal cavity.

Needless to add that if the uterus is small and the uterine artery has been secured, the next step in uterine removal is to deliver the fundus through either the anterior or posterior colpotomy.

Discussion

Vaginal hysterectomy was the first minimally invasive surgical approach for benign Gynecologic conditions. Randomized controlled trials and Cochrane database analysis [2,3,4] have demonstrated that women treated by vaginal hysterectomy experience lower morbidity, less pain, more rapid recovery, and a more rapid return to normal activities compared with abdominal or laparoscopically assisted vaginal hysterectomy. They also consume fewer health care dollars and resources. Cochrane review concluded that vaginal hysterectomy, rather than abdominal, should be performed whenever technically feasible to reduce complications, as it shortens hospital stays, and accelerates the patient's return to normal

activities. Johns and colleagues suggested that the route of hysterectomy is usually determined by the skill, experience, and preference of the operating surgeon, few other parameters matter. Vaginal hysterectomy has usually been indicated for women with uterine or pelvic prolapse, and traditional indications for abdominal hysterectomy have included an enlarged uterus, prior pelvic surgery, malignancy, and extra uterine disease, such as endometriosis or pelvic inflammatory disease. We now know that successful vaginal hysterectomy can be done in most of these patients; however, special techniques, such as uterine coring or bivalving or bisection, are often helpful. It is a known fact, but repositing the hemiuterus inside and then completing the surgery adds to more success rate. With increasing confidence and skill that comes from experience, there are very few patients with indications for hysterectomy in whom the procedure cannot be performed vaginally. Intra myometrial coring was introduced by Lash in 1941 and reintroduced in 1986 for removal of large uteri [1]. The Lash or coring incision reduces the size of the uterus by decreasing its width, thereby increasing its length, similar to a baby's head as it becomes molded during childbirth. In effect, coring converts a spherical structure into an elongated rod shape, enhancing the surgeon's ability to facilitate transvaginal removal of a wide uterine fundus. This is a surprisingly bloodless maneuver once the uterine arteries have been secured. Strong traction is placed on the uterus during the coring, which restricts blood flow from the ovarian pedicles. Using guidelines to determine the route of

hysterectomy adopted by the National Guideline Clearinghouse, it is feasible to perform 90% of hysterectomies for benign disease indications via the vaginal route. Following the National Guideline Clearinghouse guidelines for selecting the route of hysterectomy, even for a resident training environment, has been shown to decrease the number of abdominal hysterectomies [5]. To conclude vaginal hysterectomy should be the "gold standard" for the surgical removal of the uterus. Gynecologic surgeon should try to perform the benign hysterectomies by the vaginal route. Simple technique modification in bivalving the uterus and repositing one part inside, gives definite success. In resource poor countries and even in developed countries this will definitely reduce the cost. For most indications, vaginal hysterectomy has significant advantages when compared with hysterectomy by alternative routes for similar indications. Training during residency may have a significant impact on a surgeon's expertise and comfort with this procedure, limiting its use in the treatment of women with indications for hysterectomy. It is in the best interests of both patients and physicians to advocate for combined training of this procedure and its use in the treatment of women with benign Gynecological disorders.

References

1. Lash AF. A method for reducing the size of the uterus in vaginal hysterectomy. *Am J Obstet Gynecol.* 1941; 42:452.
2. Nieboer TE, Johnson N, Lethaby A, Tavender E, Curr E, Garry R, van Voorst S, Mol BWJ, Kluivers KB. Surgical approach to hysterectomy for benign Gynaecological disease. *Cochrane Database of Systematic Reviews* 2009; 3. Art. No.: CD003677. DOI: 10.1002/14651858.CD003677.pub4.
3. Neil Johnson, David Barlow, Anne Lethaby, Emma Tavender, Liz Curr, Ray Garry, Methods of hysterectomy: systematic review and meta-analysis of randomised controlled trials. *BMJ.* 2005 June 25; 330(7506): 1478.
4. Johnson N, Barlow D, Lethaby A, Tavender E, Curr E, Garry R. Surgical approach to hysterectomy for benign gynaecological disease. *Cochrane Database of Systematic Reviews* 2006; 2:CD003677. [Art. No.: CD003677. DOI:]
6. Johns DA, Carrera B, Jones J, et al. The medical and economic impact of laparoscopically assisted vaginal hysterectomy in a large, metropolitan, not-for profit hospital. *Am J Obstet Gynecol* 1995; 172(6):1709.
5. Kives S, Lefebvre G, Wolfman W, Leyland N, Allaire C, Awadalla A, Best C, Leroux N, Potestio F, Rittenberg D, Soucy R, Singh S. Supracervical hysterectomy. *J Obstet Gynaecol Can* 2010 Jan; 32(1):62- 8.