Original Article

Morbidity and Mortality associated with Vaaginal Hysterectomy

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ABSTRACT

Objectives: To access the morbidity and mortality of vaginal hysterectomy

Study Design: Observational analytical study of cohort type

Place and Duration of Study: Department of Obstetrics and Gynecology, Bolan Medical Complex Hospital, Quetta, from June 2008 to June 2010.

Patients and Methods: This prospective study was conducted in department of Obstetrics and Gynecology Quetta from June 2008 to June 2010.One hundred twenty five patients undergone vaginal hysterectomy were studied. The age ranges from 25 -65years.Detailed history were taken. In each patient thorough systemic examination was performed and patient with finding of medical disorder were excluded. All analysis and computation including data base were done by SPSS 10.

Results: During the study period, a total of one hundred twenty five women undergone vaginal hysterectomy were observed. All the cases were within age group ranging from 25-65 years of age. Out of them 48% were between 41 – 50 years, 27% between 51 -60 years, 9.6% belongs to 25-40 years of age and 15.2% were above the age of 60 years. Considering the commonest indication of vaginal hysterectomy is utero vaginal prolapsed, other important indications were dysfunctional uterine bleeding and uterine myoma. Comprises of the intra-operative and postoperative complications, show hemorrhage was the main complication during the surgery and it is the major cause of postoperative mortality in our study.

Conclusion: Vaginal hysterectomy have less morbidity, shorter hospital stay and early resumption of patient to daily activities In our referral area where women's delivered at there home attend by inexperienced DIAS-traditional birth attendants, rapid succession of pregnancy greatly enhance the Perineal tear leads to high ratio if utero vaginal prolapse. Vaginal hysterectomy having less morbidity and mortality, so it is more convenient in our center.

Key Words: Vaginal hysterectomy, bilateral salpingo-oophorectomy, abdominal Hysterectomy.

INTRODUCTION

Vaginal hysterectomy is a procedure in which the uterus is surgically removed through the vagina. One or both ovaries and fallopian tubes may be removed during the procedure as well; removal of both ovaries and fallopian tubes is called bilateral salpingo-oophorectomy (BSO). A vaginal approach may be used if the uterus is not greatly enlarged, and if the reason for the surgery is not related to cancer[1].

Studies have shown that vaginal hysterectomy has fewer complications, requires a shorter hospital stay, and allows a faster recovery compared to removal of the uterus through an abdominal incision (abdominal Hysterectomy)[2].

The uterus is a hollow, pear-shaped muscular organ located in the lower abdomen or pelvis. One end of each fallopian tube opens into the side of the uterus, at the upper end, and the other end of the fallopian tube lies next to an ovary. At its lower end, the uterus narrows and opens into the vagina. The lower end of the uterus is called the cervix. The ovaries lie Next to and slightly behind the uterus[3].

A hysterectomy may be advised for a number of conditions. For some of these conditions, there may be alternatives to hysterectomy[4].

Excessive uterine bleeding, called menorrhagia, can lead to anemia (low blood iron count), fatigue, and contribute to missed days at work or school. Menorrhagia is generally defined as bleeding that lasts longer than seven days or saturates more than one pad per hour for several hours[5].

Menorrhagia and metrorrhagia are generally treated first with medication or other surgical alternatives to hysterectomy. However, abnormal uterine bleeding that does not improve with conservative treatments may require hysterectomy[6].

Fibroids are noncancerous growths of uterine muscle. Fibroids may become larger during pregnancy, and typically shrink after menopause. They may cause excessive and irregular uterine bleeding[7].

Pelvic organ prolapse occurs due to stretching and weakening of the pelvic muscles and ligaments. This allows the uterus to fall (or prolapse) into the vagin[8].

It is usually related to pregnancy, vaginal childbirth, genetic factors, chronic constipation, or lifestyle factors (repeated heavy lifting over the lifetime)[9].

Precancer or carcinoma in situ (CIN 3) of the cervix that does not resolve after other procedures
(such as cone biopsy, laser or cryosurgery) may require hysterectomy[10].

Endometrial hyperplasia is the term used to describe excessive growth of the endometrium (the tissue that lines the uterus). It can sometimes lead to endometrial cancer. Although endometrial hyperplasia can often be treated with medication, a hysterectomy is sometimes needed or preferred to medical therapy[11].

Chronic pelvic pain can be due to the effects of endometriosis or scarring (adhesions) in the pelvis and between pelvic organs. However, pelvic pain can also be caused by other sources, including the gastrointestinal and urinary systems. It is important for a woman with pelvic pain to ask about the probability that her pain will improve after hysterectomy[12].

Before surgery, there are two main decisions that need to be made: whether the ovaries should be removed, and whether estrogen replacement therapy is needed[13].

Removal of ovaries - A hysterectomy does not involve removing the ovaries, but they may be removed at the same time as hysterectomy; this procedure is known as oophorectomy[14].

The decision to remove the ovaries depends upon several considerations. Occasionally, it may not be possible to remove the ovaries due to scar tissue or other factors that increase the risk of removal[15].

Premenopausal women may decide to keep the ovaries to provide a continued, natural source of hormones, including estrogen, progesterone, and testosterone[16].

These hormones are important in maintaining sexual interest and preventing hot flashes and loss of bone density loss. On the other hand, women who have menstrual cycle-related migraines, epilepsy, or severe premenstrual syndrome may have an improvement in symptoms when hormone levels are reduced by removal of the ovaries. Individuals should discuss the risks and preferences with a doctor before surgery[17].

Estrogen replacement therapy - Estrogen replacement therapy (ERT) may be recommended after surgery for women who had their ovaries removed. Women who have not reached menopause may use ERT to avoid hot flashes, night sweats, and loss of bone density, which may occur when the ovaries are surgically removed. Women who plan to use ERT should talk with their clinician about the risks and benefits and about how long to use this treatment[18].

In younger women who retain their ovaries, ERT may be needed at a later date if the ovaries stop functioning earlier than expected.

Pre-operative testing — Standard pre-operative testing may include a physical examination, ECG, chest x-ray, and blood testing, depending upon age and other medical condition Vaginal hysterectomy is performed in a hospital setting, and generally requires one to two hours in the operating room. Patients are given general or spinal anesthesia plus sedation so that they feel no pain. Heart rate, blood pressure, blood loss, and respiration are closely observed throughout the procedure. After surgery, patients are transferred to the recovery room so that they can be monitored while waking up. Most patients will then be transferred to a hospital room and will stay one to two days[19].

After surgery has begun, the surgeon may find conditions, such as extensive scar tissue, that require him or her to make an abdominal incision to remove the uterus. Sometimes these conditions are not apparent before surgery.

A number of complications can occur as a result of hysterectomy. Fortunately, most can be easily managed and do not cause long-term problems[20].

Hemorrhage - Excessive bleeding (hemorrhage) occurs in a small number of cases. Excessive bleeding may require a blood transfusion and/or a return to the operating room to find and stop it.

Infection - Low-grade fever is common after hysterectomy, is not always caused by infection, and usually resolves without treatment. However, a high or persistent fever may signal an infection. Serious infection occurs in less than five percent of women, and can usually be treated with intravenous antibiotics. Much less commonly, patients require another surgical procedure.

Constipation - Constipation occurs in most women following hysterectomy, and can usually be controlled with a regimen of stool softeners, dietary fiber, and laxatives. Urinary retention - Urinary retention, or the inability to pass urine, can occur after vaginal hysterectomy. Urine can be drained using a catheter until retention resolves, usually within 24 to 48 hours.

Blood clots - Pelvic surgery increases the risk of developing blood clots in the large veins of the leg or lung. The risk is increased for approximately six weeks after surgery. Medications may be given to some women to prevent blood clots. In addition, women taking oral contraceptives or hormone replacement should ideally discontinue them one month prior to surgery since they can further increase the risk of blood clots. Women who are sexually active and premenopausal should use alternative methods of birth control (e.g. condoms) to prevent pregnancy before surgery[21].

Damage to adjacent organs - the urinary bladder, ureters (small tubes leading from the kidneys to the bladder), and large and small intestines are located in the lower abdomen and pelvis and can be injured during hysterectomy. Bladder injury occurs one to two percent

of women who have vaginal hysterectomy, while bowel injury occurs in less than one percent of women. Injury can usually be detected and corrected at the time of surgery. If detected after surgery, another operation may be needed.

Early menopause - Women who have undergone hysterectomy may experience menopause earlier than the average age of menopause (age 51). This may be due to an interruption in blood flow to the ovaries as a result of removing the uterus. Fluids and food are generally offered soon after surgery. Intravenous (IV) fluids may be administered during the first day, particularly if there is nausea or vomiting. Pain medicine is given as needed, either intravenously, or by intramuscular (IM) injection or pill. Patients are encouraged to resume their normal daily activities as soon as possible. Being active is particularly important since it helps to prevent complications, such as blood clots, pneumonia, and gas pains.

Studies of women's response to hysterectomy show that most women are very satisfied with their results. Most reported improvement in symptoms directly related to the uterus, including pain and vaginal bleeding.

PATIENTS AND METHODS

It was an Observational analytical study conducted at Outpatient department of Gynecology and Obstetrics BMCH, Quetta. Over a period of two year from June 2008 to June 2010.

All the patients in this study were included on the basis of detailed history, clinical examination and investigations through out door patient department.

Detailed questions including age, parity, chief complaints, history of medical disorder and surgery was taken. . Each patient was examined thoroughly after complete and detail history. All the patients were undergone vaginal hysterectomy. The postoperative period were observed.

All analysis and computation including data base were done by SPSS version 10. Mean ± SD was computed for age. Analysis of different variables was performed using test of significance chisquare test.

RESULTS

This study consist of the 125 patient of vaginal hysterectomy, which were carried out during the period of two years from June 2008 to June 2010 in the department of gynecology Bolan Medical Complex Hospital Quetta.

All the women were counseled regarding the objective and different diagnostic procedures and the cost of procedures.

Regarding the age, all the cases were within reproductive age group ranging from 25 years to 65 years of age. 9.6% were between 25-40 years, 48% were between 41-50 years, and 27.2% were 51-60 years, 15.2% were above 60 year of age group. The mean age was 33 year. (Table No.1)

Considering the incidences of vaginal hysterectomy as compare to the abdominal hysterectomy were done in our center in two years duration,, shows out of 520 hystrectomies, vaginal hysterectomies were done in 125 patients. The ratio of about 1:3.2 (Table No.2)

Comprises of the intra-operative and postoperative complications, shows hemorrhage was the main complication during the surgery and it is the major cause of postoperative mortality in our study. Infection was the second most complication. (Table No.3)

Table No.1: Age Distribution of Cases. (n-125)

Age	Number	Percent
25-40 years	12	9.6%
41-50 years	60	28%
51-60 years	34	27.2%
About 60 years	19	15.2

Table No.2: Incidence of Vaginal Hystrectomy (n-125)

Year	Vaginal Hystrectomy	%	Abdominal Hystrectomy	%
2008	40	32%	105	26.5%
2009	55	44%	160	20.4%
2010	30	24%	130	33%
Total	125	24%	395	76%

Table No.3: Complication (n-125)

Complication	Number	Percent
Hemorrhage	20	16%
Urinary bladder Injury	2	1.6%
Urinary tract infection	20	16%
Fever	20	16%
Wound infection	3	2.4%
Vault prolapsed	4	3.2%
Mortality	1	0.8%

DISCUSSION

Hysterectomy is the most common non- pregnancy related surgical procedure performed in united state.

The ratio of vaginal hysterectomy to abdominal hysterectomy is 1:3 is depend upon certain factors including ability of a surgeon, indication for surgery, practicing style, the absence of a clear guideline for selecting a surgical route, lack of patients knowledge about the option and in appropriate decision making.

Vaginal hysterectomy is less invasive and provides an acceptable alternative to abdominal surgery in especially medically compromised patient with problem

like Diabetes Mellitus, Hypertention and Cardiovascular disease.

In our study patients underwent vaginal hysterectomy was 24% and the ratio of 1.3.2 in vaginal hysterectomy and abdominal hysterectomy. In other study conducted by Thomas the frequency of vaginal hysterectomies 25% and abdominal hystrectomy was 75%.Some studies show the ratio of vaginal hysterectomy and abdominal hysterectomy was about 1.4.22

An other study conducted by Mather wood in Newzeland, total of 1940 hysterectomies were performed during 5 year period; 74% of hysterectomies were performed abdominally, 24% vaginally and 2% were laparoscopically assisted.

The largest segment of women who underwent vaginal hysterectomy were in age group 40-50 years. The percentage was 48 while a study conducted by Arif Tajamul the percentage was 42.85 in the same age group.23

In our study intra-operative complication rate was 10% and postoperative was 15%, in study conducted by Dr. Tajamul complication rate during surgery was 14.3%.

There was one mortality postoperatively in our study. In most of studies showed vaginal hysterectomy causes 0.1% to 0.2% mortality due to age and medical complication.

The study conducted by Harkki Siren overall complication rate was 44% for abdominal hysterectomy (AH) and 27.3% for vaginal hysterectomy (VH). Vaginal hysterectomy was associated with a lower febrile morbidity and minor complication rate. Prophylactic antibiotics reduced the febrile morbidity for VH and AH by 50% and 40% respectively the overall mortality rate was 1.5 per 1000.24

CONCLUSION

Vaginal hysterectomy is better routes of operation as compared to abdominal hysterectomy but it depends upon the ability of surgeon and indication of surgery.

Vaginal hysterectomy has less morbidity, shorter hospital stay and early resumption of patient to daily activities. In our referral area where women's delivered at their homes attend by inexperienced DIAStraditional birth attendants, rapid succession of pregnancy greatly enhance the Perineal tear leads to high ratio of utero vaginal prolapsed.

Vaginal hysterectomy having less morbidity and mortality, so it is more convenient in our center

REFERENCES

1. Sultan CJG. Treatment of large fibroid uterus. Br J Obstetric Gynaecology 2001; 103:994-6.
2. Lowe GD. Uterine prolapse. In: Edmond KD. Dew Hurst text book of gynecology for postgraduates. 6th ed. London: Blackwell science, 2007: 552-4.
3. Bhatla N. Tumors of the corpus uteri. In: Bhatla N, Jeff Coates R. Jeff Coate's principles of Gyneacology. 5th ed. London: Arnold, 2001: 473-80.
4. Summitt RL, Stovall T. The most expensive hystrectomy. Am J Obstetric Gynecology 2006; 51:59-104.
5. Vollenhoven B, Weston G. Clinical anatomy in vaginal surgery. In: Shaw WR, Soutter L. Shaw's Gynaecology. 3rd ed. London: Churchill Livingstone, 2003:85-102.
6. Campel S, Monga A. Gynaecology by Ten Teachers. 17th ed. London: Arnold, 2005: 120-6.
7. Latif R. Uterovaginal prolapse. In: Latif R. Gynaecology. 3rd ed. Lahore: medical publishers; 2004:206-21.
8. Akhter S. Review of current management protocol in uterine fibroid. J coll physician's surg Pak 2004; 5:208-11.
9. Moore K, Dalley A. Pelvis and perineum. In: Moore K, Dalley A. Clinically oriented anatomy. 4th ed. Philadelphia: Lippincott Williams & Wilkins; 2007:378.
10. Milley PS. Urogenital system. In: Sadler T. Lang man's Medical Embryology. 9th ed. Philadelphia: Lippincott & Williams; 2006: 312-19.
11. Kovac SR.Guideline to determine the rout if hysterectomy. Obstet-Gynecol. 2006;87-92.
12. David L, Beverley V, Gareth W. Uterine fibroid. In: Shaw WR, Soutter L. Shaw's Gynaecology .3rd ed. London; Churchill living stones; 2003: 477-81.
13. Christopher P. Female genital tract .In: Ramzi S, Kumar V, Robbins S. Robbins Pathologic basis of disease.7th ed. New York: W.B Saunders; 2004: 1059.
14. Fredrick T. Female genetalia. In: John A. Anderson's pathology. 12th ed. Delhi: Jaypee brothers; 1998: 115-20.
15. Christopher P. Female Genital tract. In: Cotran R, Kumar V, Robbins S. Robbins Pathologic Basis of Disease7th ed. London: W.B. Sanders, 2004; 1033-89.
16. Miller N, Ludovici R. The origin and development of uterine fibroids. Am J Obstet Gynecol .2004; 76: 231-244.
17. Sheth S. The place of Oopherectomy at vaginal hysterectomy.J Repord Med. 2003: 480-81.
18. Lowe GD. Uterogenital prolapse. In: Edmond K D. Dew Hurst text book of gynecology for postgraduates. 7th ed. London: Black well science; 2008: 552-4.

19. Chohan A. Vault prolapse. In: Chohan A. Fundamentals of Gynaecology. 1st ed. Lahore: MAR publishers; 2000: 239-41.
20. Davis JL. Vaginal hystrectomy at a prospective study. Obstet- Gynecol 2004; 86: 127.
21. Reinner J, Wilcox E. Early discharge after vaginal hystrectomy an overview: Clin Obstet Gynecol. 2005; 18:44-64.
22. Arif Tajamul. Vaginal hystrectomy. Pak J Obstetrics Gynecology . 2006; 11:24-8.
23. Mather W. indication of vaginal hystrectomy.Afr Med J. 2008; 5: 670-76.
24. Harkki Siren. Confirmation of the postoperative diagnosis for hystrectomy.Am J Obstet- Gynecol. 2004; 6:441-5.

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