ABSTRACT

Background: The overall incidence of hysterectomy in India is 7% which is lower as compared to other countries like U.S. which is around 9%. But recently, there is upsurge in the prevalence of hysterectomy. The reason for this may be due to reduced hospital stay and cost. Also, now a days hysterectomy by any modality is increasingly accepted by the professionals and the professional associations and gatherings like conferences as the sole treatment for any benign condition in compare to other modalities of treatment. An attempt was made here in this study to analyse the after-effects of hysterectomy. The overall aim of this study was to describe and investigate postoperative complications and the corrective surgeries being done for them.

Methods: It is a retrospective statistical hospital-based study of relaparotomy done in post hysterectomised patients who came to Sir T General Hospital, Bhavnagar in the Department of Obstetrics and Gynecology. The study was done for the duration of 6 months from October 2016 to March 2017; during the time total of 55 patients were followed for this study that underwent re-surgery for their problems.

Results: The incidence of Laparotomy following hysterectomy was 42.5% and the incidence of corrective surgeries for urinary symptoms and vault prolapse was 57.5% including the highest incidence of Anterior colpoperineorrhaphy with Posterior colpoperineorrhaphy being 21.2%. The occurrence of problems was more in the patients who had undergone Abdominal hysterectomy (62.5%) in comparison to those who underwent Vaginal hysterectomy (32.5%).

Conclusions: Oophorectomy should be encouraged with hysterectomy after menopause to reduce incidence of Laparotomy following hysterectomy.

Keywords: Hysterectomy, Laparotomy, Oopherectomy

INTRODUCTION

The overall incidence of hysterectomy in India is 7% which is lower as compared to other countries like U.S. which is around 9%. But recently, there is upsurge in the prevalence of hysterectomy.

The reason for this may be due to reduced hospital stay and cost. Also, now a days hysterectomy by any modality is increasingly accepted by the professionals and the professional associations and gatherings like conferences as the sole treatment for any benign condition in compare to other modalities of treatment. Also, the demand for hysterectomy by patients as sole treatment is increased due to increased awareness about it. The popularity of non-descent vaginal hysterectomy and laparoscopic hysterectomy is also a reason for this upsurge.

Sometimes it seems that the patient’s demand for hysterectomy is for trivial reasons. Sometimes the patient suffers more in terms of pain and the other morbidities after hysterectomy than she would have suffered without it. The symptoms for which the patient is likely to come back may vary from very minor pain in abdomen, urinary
problem to large ovarian cysts and rarely symptoms of a malignant growth. An attempt was made here in this study to analyse the after-effects of hysterectomy.

The overall aim of this study was to describe and investigate postoperative complications and the corrective surgeries being done for them. One specific objective was to estimate the effect of Vaginal hysterectomy compared with Abdominal hysterectomy on the risk of subsequent complications.

The aim and objectives of the study are to know the incidence of resurgery for problems arising following hysterectomy; to study the indications for various surgeries in post-hysterectomy patients and to study the time interval between hysterectomy and resurgery.

**METHODS**

It was a retrospective statistical hospital-based study of relaparotomy done in post hysterectomized patients who came to Sir T General Hospital, Bhavnagar in the Department of Obstetrics and Gynecology. The study was done for the duration of 6 months from October 2016 to March 2017; during the time total of 55 patients were followed for this study.

**Inclusion criteria**

- Patients in whom Abdominal or Vaginal hysterectomy done for benign diseases
- Patients who developed any problems following hysterectomy.

**Table 1: Incidence of symptoms in post-hysterectomy patients.**

| Symptoms                              | No. of cases | Incidence (%) |
|---------------------------------------|--------------|---------------|
| Pain in abdomen                       | 20           | 36.36         |
| Pain in iliac fossa                   | 6            | 10.90         |
| Something coming out p/v              | 7            | 12.72         |
| Something coming out p/v with stress urinary incontinence | 8 | 14.54 |
| Dribbling of urine continuously       | 2            | 3.63          |
| Burning micturition                   | 7            | 12.72         |
| White discharge p/v                   | 5            | 9.09          |

The study comprises total of 55 patients out of which 33 patients underwent resurgery for their problems. In patients with ovarian mass, after confirming the diagnosis on USG both ovaries were removed and sent for histopathological examination. In patients who developed complications following VH, the corrective surgery was done for the particular diagnosis. The rest of the 22 patients were just treated symptomatically for their complaints.

**Table 2: No abnormality in patients treated symptomatically.**

| Examination | No abnormality detected (NAD) | Incidence (%) |
|-------------|-------------------------------|---------------|
| P/A         | 12                            | 21.81         |
| P/S         | 10                            | 18.18         |
| P/V         | 10                            | 18.18         |
| USG         | 12                            | 21.81         |

The patients who had c/o pain in abdomen but the USG-abdomen with pelvis suggested no abnormality were 12 in number (21.81%). They were simply given medications for their complaint. The patients who had complaint of burning micturition and white discharge p/v but their clinical examination i.e. p/s and p/v examination suggested no abnormality were 10 in number (18.18%). Out of these 10 patients, 7 (12.72%) were diagnosed of having UTI by Urine R and M. So, 7 patients were treated for UTI (12.72%) and the other 3 patients were treated for their c/o white discharge p/v (5.45%).

**Table 3: Type of hysterectomy done in all 55 patients.**

| Type of hysterectomy                  | No. of cases | Incidence (%) |
|---------------------------------------|--------------|---------------|
| Abdominal hysterectomy                | 22           | 40.0          |
| Vaginal hysterectomy                  | 15           | 27.27         |
| Non-descent vaginal hysterectomy      | 11           | 20.0          |
| Total laparoscopic hysterectomy       | 7            | 12.72         |

**RESULTS**

Type of hysterectomy done in 33 patients who were re-operated for their various problems later on is shown in Table 4.

**Table 4: Type of hysterectomy done in 33 patients who were operated.**

| Type of hysterectomy | No. of cases | Incidence (%) |
|----------------------|--------------|---------------|
| Abdominal hysterectomy | 22           | 66.66         |
| Vaginal hysterectomy  | 09           | 33.33         |
| Non-descent vaginal hysterectomy | 02 | 6.06 |

Table 5 is showing the occupation of those 33 patients as occupation may sometimes affect significantly on the occurrence of some problems such as stress urinary incontinence, vault prolapsed etc.
Table 5: Occupation.

| Type of occupation | No. of cases | Incidence (%) |
|--------------------|-------------|---------------|
| Housework          | 14          | 42.4          |
| Laborer            | 19          | 57.6          |

33 patients underwent resurgery after hysterectomy for their various problems (Table 6) which were developed after variable period of duration after initial hysterectomy.

Table 6: Symptoms of patients who underwent resurgery.

| Symptoms                              | No. of cases | Incidence (%) |
|---------------------------------------|--------------|---------------|
| Pain in abdomen                       | 8            | 24.2          |
| Pain in iliac fossa                   | 6            | 18.2          |
| Something coming out p/v              | 7            | 21.2          |
| Something coming out p/v with stress  | 8            | 24.2          |
| Dribbling of urine continuously       | 2            | 6.1           |
| Burning micturition                   | 2            | 06.10         |

Table 7 is showing the duration of onset of symptoms since the initial hysterectomy in these patients.

Table 7: Duration of onset of symptoms since hysterectomy.

| Duration of symptom                  | No. of cases | Incidence (%) |
|--------------------------------------|--------------|---------------|
| <1 Year                               | 9            | 27.3          |
| 1-3 Years                             | 20           | 60.6          |
| >3 Years                              | 4            | 12.1          |

Table 8 is showing the age of the patients at the time of their initial hysterectomy and Table-6 is showing various indications for which the hysterectomy was done in those 33 patients. Incidence of Dysfunctional Uterine Bleeding as an indication for hysterectomy was observed as the highest among all in this study.

Table 8: Age at hysterectomy.

| Age (years) | No. of cases | Incidence (%) |
|-------------|--------------|---------------|
| <40         | 15           | 45.5          |
| 40-45       | 17           | 51.5          |
| >45         | 1            | 3.0           |

Table 9: Indication of hysterectomy.

| Indication                              | No. of cases | Incidence (%) |
|-----------------------------------------|--------------|---------------|
| 3-degree UV prolapse                    | 11           | 33.3          |
| DUB                                     | 12           | 36.4          |
| Fibroid Uterus                          | 8            | 24.2          |
| PID                                     | 2            | 6.1           |

Table 10: Interval between hysterectomy and onset of symptoms.

| Duration | No. of cases | Incidence (%) |
|----------|--------------|---------------|
| <1 Year  | 4            | 12.1          |
| 1-5 Years| 8            | 24.2          |
| 5-10 Years| 16           | 48.5          |
| >10 Years| 5            | 15.2          |

It was observed here that most of the patients (48.50%) developed various symptoms between 5 to 10 years of their initial hysterectomy.

Table 11: Diagnosis in post-VH patients.

| Diagnosis                                                      | No. of cases | Incidence (%) |
|                                                               |--------------|---------------|
| Cystocele                                                     | 10           | 30.3          |
| Cystocele with stress urinary incontinence                    | 3            | 9.1           |
| Rectocele                                                     | 2            | 6.1           |
| Vault prolapse                                                | 2            | 6.1           |
| Vesico-vaginal fistula                                        | 2            | 6.1           |

Patients who had undergone Vaginal hysterectomy initially, later on developed various problems which were diagnosed as cystocele, cystocele with stress urinary incontinence, rectocele, vault prolapsed and vesico-vaginal fistula (Table 11). Highest number of cases was with cystocele alone following Vaginal hysterectomy.

Table 12: Diagnosis in post-AH patients.

| Diagnosis                              | No. of cases | Incidence (%) |
|----------------------------------------|--------------|---------------|
| Simple ovarian cyst                    | 6            | 18.2          |
| Serous cystadenoma of ovary            | 2            | 6.1           |
| Mucinous cystadenoma of ovary          | 1            | 3.0           |
| Endometriotic cyst of ovary            | 2            | 6.1           |
| Dermoid cyst of ovary                  | 1            | 3.0           |
| Intraperitoneal adhesions              | 2            | 6.1           |

Table 12 is showing incidence of various problems in patients who had undergone Abdominal hysterectomy initially. Out of different types of benign ovarian diseases observed in them the incidence of simple ovarian cyst was highest (18.20%).

Most common surgery performed among 33 patients was Laparotomy (42.5%) for various ovarian pathologies diagnosed by USG findings, followed by Anterior colporrhaphy with posterior colpopereineorrhaphy (21.2%) for cystocele and rectocele. Incidence of Sacrospinous fixation surgery for vault prolapsed in this study was 12.1%. The lowest incidence was of the Vesico-vaginal fistula repair (6.1%) which was appreciable actually as the fistula repair needs skillful approached surgery.
Table 13: Type of resurgery done in 33 patients.

| Type of resurgery                          | No. of cases | Incidence (%) |
|--------------------------------------------|--------------|---------------|
| Anterior colporrhaphy                      | 3            | 9.1           |
| Anterior colporrhaphy with posterior colpoperineorrhaphy | 7            | 21.2          |
| Anterior colporrhaphy with trans-obturator tape (TOT) fixation | 3            | 9.1           |
| Sacrospinous fixation of vault prolapse    | 4            | 12.1          |
| Vesico-vaginal fistula repair              | 2            | 6.1           |
| Laparotomy                                 | 14           | 42.5          |

Out of 33, most of the patients that is 16 underwent resurgery for their problems within 5-10 years of the initial hysterectomy (48.5%), 8 patients (24.2%) underwent resurgery within 1-5 years of hysterectomy, 5 patients (15.2%) after 10 years of initial hysterectomy and only 4 patients (12.1%) within less than 1 year of initial hysterectomy underwent resurgery for their problems.

Table 14: Interval between hysterectomy and resurgery.

| Interval          | No. of cases | Incidence (%) |
|-------------------|--------------|---------------|
| <1 year           | 4            | 12.1          |
| 1-5 years         | 8            | 24.2          |
| 5-10 years        | 16           | 48.5          |
| >10 years         | 5            | 15.2          |

Table 15 is showing the incidence of type of initial hysterectomy in those 16 patients who underwent resurgery for their problems within 5 to 10 years of initial hysterectomy. As the duration of 5-10 years is highest in this study for resurgery following hysterectomy, it is necessary to analyze what was the type of initial hysterectomy in those 16 patients.

Table 15: Type of hysterectomy in 16 patients with resurgery during 5-10 years of hysterectomy.

| Type of hysterectomy | No. of cases | Incidence (%) |
|----------------------|--------------|---------------|
| Post AH              | 10           | 62.5          |
| Post VH              | 4            | 25.0          |
| Post NDVH            | 2            | 12.5          |

Here it was observed that most of the patients who developed some problem within 5-10 years of their initial hysterectomy had undergone Abdominal hysterectomy (62.5%). So, it can be concluded that the benign ovarian diseases had the highest incidence during 5-10 years of hysterectomy.

DISCUSSION

Generally, hysterectomy is regarded by females as end of gynecological problems but emergence of pelvic mass or urinary symptoms subsequently has profound physical and psychological impact.2,4 Present preliminary study has looked into various possibilities along with its management.2 Oophorectomy after menopause is a standard procedure with hysterectomy but it is difficult with vaginal hysterectomy. Common practice is to leave healthy ovaries behind if vaginal hysterectomy is performed in postmenopausal women for any indication other than the hormonal problems. Pelvic masses have wide spectrum of imaging characteristics and clinical manifestations. Ovarian cysts of any diameter in perimenopausal and menopausal women create more concern because of the increased incidence of ovarian cancer in this group.3 So this practice of leaving behind the ovaries should be discouraged to minimise the incidence of Laparotomy in form of resurgery after hysterectomy.

The ovarian pathology that was recognized in the post-AH patients was benign in type. Ultrasonography (either abdominal or vaginal), doppler is important in diagnosis, in monitoring and determining malignant potential and is costeffective.3-7

Previous hysterectomy does not seem to be of great importance for the development of de novo incontinence or remission.8 A 3-year prospective study showed that total hysterectomy, independent of route, was not associated with an increase in urge or stress urinary incontinence symptoms.9 However, in this study 30.3% patients had developed urinary symptoms following vaginal hysterectomy.

Also, there is increased incidence of vault prolapse following vaginal hysterectomy (descent or non-descent type). To prevent this problem, McCall Culdoplasty along with VH should always be done as studies have shown McCall Culdoplasty to be superior.10

In this study incidence of cystocele following vaginal hysterectomy was the highest that is 30.4% in comparison to other problems.

In the industrialized world, the most common cause (>75%) of VVF is injury to the bladder at the time of gynecologic, urologic, or other pelvic surgery.11 The main complication of VVF surgery is recurrent fistula formation.12 In this study there was the lowest incidence of VVF repair surgery (6.1%) as it needed a skill-full approach for its correction.

Also, the incidence of laparotomy following hysterectomy was 42.5% and the incidence of corrective surgeries for urinary symptoms and vault prolapse was 57.5% including the highest incidence of Anterior colporrhaphy with Posterior colpoperineorrhaphy being 21.2%.

Occurrence of symptoms following hysterectomy was maximum between 5 to 10 years after the hysterectomy.
According to this study, the need of resurgery for any problem following the laparoscopic hysterectomy did not arise yet.

CONCLUSION

VH was done in the patients who had problems other than any endocrinological or hormonal problems. So, emergence of ovarian pathology in post-VH patients was not observed.

The identification of Urinary Tract Infections and their proper treatment prior to the surgery is very important to decrease the incidence of urinary tract problems following hysterectomy. Vaginal hysterectomy is a patient-evaluated efficient treatment for uterovaginal prolapse with a swift recovery and a low rate of complications. Urinary symptoms are the major problems arising subsequently after hysterectomy, most commonly after vaginal hysterectomy. Over-handling or over-dissection of bladder during surgery, especially Vaginal Hysterectomy should be avoided to reduce the occurrence of urinary symptoms following the surgery.

Incidence of vault prolapse has declined over the years but not eliminated yet. Following vaginal hysterectomy these complications which occur definitely need the corrective surgeries in form of resurgery following hysterectomy.

To prevent the occurrence of fistula following the surgery early identification of the problem is necessary, earliest being at the time of surgery. Although the single layer repair of fistula is easy, a successful repair of such fistulas requires an accurate diagnostic evaluation and timely repair using procedures that exploit basic surgical principles and application of interposition flaps. The method of closure depends on the surgeon’s training and experience. So, prevention is always better than cure!

The efforts to disclose latent stress incontinence or urinary tract infections should be undertaken preoperatively only. Absence of the malignant potential in these ovarian problems still needs further and deeper studies. What then should be offered to a woman undergoing hysterectomy for benign disease? Answer to this question is that, the Oopherectomy should be encouraged with hysterectomy after menopause to reduce incidence of Laparotomy following hysterectomy.

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REFERENCES

1. Bhatnagar P, Desai E, Patel U, Leuva B. Delayed re-laparotomy after total hysterectomy. Int J Reprod Contracept Obstet Gynecol. 2013;2:12-5.
2. Naz F, Begum A. Experience with pelvic mass following hysterectomy for benign diseases. Biomedica. 2004;20:106-9.
3. Khaw KT, Walker WJ. Ultrasound guided fine needle aspiration of ovarian cyst. Diagnosis and treatment in pregnant and non-pregnant women. Clin Radiol. 1990;41:105-8.
4. Sheth SS. Vaginal Hysterectomy. In: John Studd Progress in Obstetrics and Gynaecology. 10th vol. London: Churchill Livingstone; 1993:317-339.
5. Fleisher AC, Tait D, Mayo J. Sonographic features of ovarian remnants. J Ultrasound Med. 1998;17:551-5.
6. Chiang G, Levine D. Imaging of adnexal masses in pregnancy. J Ultrasound Med. 2004;23:805-19.
7. Farina GP, Baccoli A, Pani C. Retropertioneal Sarcomas: our experience. G Chir. 2004;25:163-6.
8. Neumann GA, Lauszus FF, Ljungstrom B. Rasmussen KL. Incidence and remission of urinary incontinence after hysterectomy-a 3-year follow-up study. Int Urogynecol J Pelvic Floor Dysfunct. 2007 Apr;18(4):379-82.
9. Gustafsson C, Ekstrom A, Brismar S, Altman D. Urinary incontinence after hysterectomy-three-year observational study. Urol. 2006 Oct;68(4):769-74.
10. Uzoma A, Farag KA. Vaginal vault prolapse. Obstet Gynecol Int. 2009;2009.
11. Stamatakos M, Sarged C, Stasinou T, Kontzoglou K. Vesicovaginal Fistula: Diagnosis Management. Indian J Surg. 2014 Apr;76(2):131-6.

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