

Pattern of Lesion in Hysterectomy Specimens and Clinical Correlation

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ABSTRACT

Aim: To study the correlation between preoperative clinical diagnosis and histopathological diagnosis of hysterectomy specimen.

Study Design: Descriptive study.

Place and duration of study: Department of Obstetrics and Gynaecology, Fatima Hospital, Baqai Medical University Karachi from November 2010 to November 2011.

Methodology: Data including age, parity, presenting complaints and indication for hysterectomy was obtained from patients. Histopathology of all hysterectomy specimens was collected.

Results: During one year study period a total of 81 hysterectomies were performed. Peak age incidence was 41-45 years and peak parity was 6-8. The most common presenting complaint was menstrual irregularities followed by chronic lower abdominal pain. Hysterectomy with bilateral salpingoophorectomy was performed in 52(64%) cases. Hysterectomy alone was performed in 15(18.5%) cases and 3(3.7%) patients had subtotal hysterectomy. In 34(42%) patients indication of hysterectomy was fibroid uterus followed by endometrial hyperplasia in 13(16%) cases. The commonest histopathological diagnosis made was chronic cervicitis 48(59.2%) cases which was an incidental finding in most of the cases followed by adenomyosis in 34(48%) cases.

Conclusion: The final diagnosis is made on histopathology so it is compulsory to send every hysterectomy specimen for histopathology. Histopathology can diagnose unusual malignancy and thus ensuring optimal management in particular of malignant disease.

Keywords: Hysterectomies, indication, complications, pathology, dysfunctional uterine bleeding

INTRODUCTION

The life time risk of hysterectomy ranges from 30 to 40%. First subtotal hysterectomy was performed by Charles Clay in Manchester, England in 1843 and first total abdominal hysterectomy in 1929. Although hysterectomy is a definitive treatment for many benign and malignant gynecological diseases but it is not risk free.¹ It is associated with risk of iatrogenic premature menopause, surgical and anesthetic complications like fistula involving ureter, bladder and gut and also chronic abdominal pain due to adhesions formation². Majority (90%) of hysterectomies are performed for benign diseases. Alternate like endometrial ablation, intrauterine hormonal devices like Mirena must be considered to avoid hysterectomies for benign diseases. Histopathological examination of hysterectomy specimens carries both diagnostic and therapeutic significance. A variety of conditions require removal of a uterus that may show no gross or microscopic pathology when examined by pathologist³. Removal of a normal uterus may be indicated and allowed in the treatment of endometriosis, DUB, pelvic organ prolapse, pelvic

inflammatory disease, ovarian, fallopian tube, vaginal cancer, pelvic pain and pelvic tuberculosis. Prevalence of uterine and adnexal pathologies varies from nation to nation and from region to region within the nation⁴.

METHODOLOGY

This is a descriptive observational study conducted at Fatima hospital Baqai Medical University Karachi from November 2010 to November 2011. All patients undergoing hysterectomy for gynecological conditions were included in the study. Obstetrical hysterectomies were excluded from the study. Information on socio demographic characteristic, presenting symptoms, indications for surgery, type of hysterectomy, histopathology reports were collected on a specially designed proforma. Data was analyzed by using percentage.

RESULTS

During this period a total of 81 hysterectomies were performed. Abdominal route was used in 70(86.4%) cases and vaginal route in 11(13.6%) cases. Fifty two (64%) cases were of total abdominal hysterectomy with bilateral salpingoophorectomy and 15(18.5%)

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cases were of total abdominal hysterectomy alone. Only 3(3.7%) patients had subtotal hysterectomy. Peak age incidence was 41-45 years with a range Of 35-70 years. Peak parity was 6-8 with arrange of P₀-P₁₁. In 50(62%) cases presenting complaints were menorrhagia/ polymenorrhagia followed by lower abdominal pain in 13(16%) cases. There were 9(11%) cases of something coming out of vagina, out of which 7 cases were of uterovaginal prolapse and two cases were of polypoidal growth. Postmenopausal bleeding was the presenting complaint in 5(6%) cases. Most common indication of hysterectomy was leiomyoma in 34(42%) cases followed by endometrial hyperplasia in 13(16%) cases, dysfunctional uterine bleeding in 8(10%) cases (Table 1). Adenomyosis was suspected in 10(12.3%) cases. Most common histopathological finding was that of chronic cervicitis 48(59.3%) cases, followed by adenomyosis in 34(42%) and leiomyoma in 29(36%) cases (Table 2). Leiomyoma and adenomyosis were common in age group 41-45, 10 cases and 13 cases respectively (Table 3). Fibroid uterus was confirmed in 22(65%) cases, endometrial carcinoma was confirmed in 75% cases (Table 4). Adenomyosis was suspected in 10 cases while it was found in 34(42%) cases histopathologically (Table 5).

Table 1: Indications for hysterectomy (n=81)

| Indication | n | %age |
|-------------------------|----|------|
| Fibroids | 34 | 42 |
| DUB | 8 | 10 |
| Utero vaginal prolapse | 7 | 8.6 |
| Chronic PID | 3 | 3.7 |
| Adenomyosis | 10 | 12.3 |
| Ovarian mass/cyst | 7 | 8.6 |
| Endometrial hyperplasia | 13 | 16 |
| Endometrial Polyp | 5 | 6.1 |
| Endometrial carcinoma | 4 | 5 |
| Cervical polyp | 3 | 3.7 |

Table 2: Spectrum of histopathological diagnosis

| Histopathological diagnosis | n | %age |
|-------------------------------------|----|------|
| Chronic cervicitis | 48 | 59.2 |
| Fibroid uterus | 29 | 36 |
| Adenomyosis | 34 | 42 |
| Endometrial hyperplasia | 6 | 7.4 |
| No remarkable pathology | 10 | 12.3 |
| Atrophic endometrium | 4 | 5 |
| Endometrial carcinoma | 1 | 1.2 |
| Carcinosarcoma | 1 | 1.2 |
| Leiomyomatous polyp | 4 | 5 |
| Chronic pelvic inflammatory disease | 1 | 1.2 |
| Endometrial hormonal changes | 6 | 7.4 |
| Ovaries | | |
| Normal | 42 | 52 |
| Follicular Cyst | 19 | 23.4 |
| Corpus Luteal Cyst | 8 | 10 |
| Endometriosis | 5 | 6 |
| Mucinous Cyst Adenoma | 1 | 1.2 |
| Malignancy | 1 | 1.2 |

Table 3: Relationship between age and histopathological findings

| Age | Chronic cervicitis | Fibroid | Adenomyosis | Ovarian tumor/cyst | Malignancy |
|-------|--------------------|---------|-------------|--------------------|------------|
| 35-40 | 15 | 6 | 8 | 4 | 0 |
| 41-45 | 7 | 10 | 13 | 6 | 1 |
| 46-50 | 6 | 3 | 7 | 5 | 0 |
| 51-55 | 6 | 2 | 5 | 2 | 2 |
| 56-60 | 2 | 3 | 5 | 1 | 1 |
| >60 | 3 | 1 | 1 | 0 | 0 |

Table 4: Percentage of confirmation of various preoperative diagnosis by histopathology

| Preoperative indications | Confirmed by Histopathology cases | %age |
|-----------------------------------|-----------------------------------|------|
| Fibroid (n=34) | 22 | 65 |
| Endometrial hyperplasia (n=13) | 6 | 46 |
| Uterovaginal prolapse (n=7) | 7 | 100 |
| Adenomyosis (n=10) | 9 | 90 |
| Pelvic inflammatory disease (n=2) | 2 | 100 |
| Ovarian cyst (n=7) | 5 | 71.4 |
| Uterine polyps (n=5) | 5 | 100 |
| Malignant ovarian tumor (n=1) | 1 | 100 |
| Ca endometrium (n=4) | 3 | 75 |
| Cervical polyps (n=3) | 3 | 100 |

Table 5: Histopathological reports inconsistent with preop diagnosis

| Disease | Preop Diagnosis | Histopathology Report |
|--------------------------------|-----------------|-----------------------|
| Dysfunctional uterine bleeding | 08 | 05 |
| Adenomyosis | 09 | 34 |
| Chronic cervicitis | 04 | 41 |
| Fibroid uterus | 34 | 30 |
| Endometrial hyperplasia | 13 | 5 |

DISCUSSION

Hysterectomy is the most commonly performed gynecological surgery throughout the world. It is a successful operation in terms of symptoms relief, patient's satisfaction and provides definitive cure to many diseases involving uterus as well adnexa. Abdominal route is used for total abdominal hysterectomy while vaginal route is used for vaginal hysterectomy⁵. Supracervical removal of uterus is termed as subtotal hysterectomy. Abdominal route is associated with longer hospital stay, increased complications and higher cost but due to, practice of styles, training habits and performance of gynecologist, most of the gynecologist still continues to use the abdominal approach for hysterectomy that could be performed vaginally.⁶ Since vaginal hysterectomy carries less risk and complications, this route is encouraged especially if the disease is confined to uterus and uterine size is less than 12 weeks⁷.

Few studies have been done in our community regarding histopathological analysis of hysterectomy specimens and relationship between the preoperative

clinical diagnosis and histopathological diagnosis⁸. The aim of this study was to analyze the pattern of lesion and correlate the findings with clinical indications. The commonest estimated age range of hysterectomy in our study is 41-50 years which is similar to that reported by Gousia Rahim Rather and Perveen S Tayyab S^{9,10}. The average parity in our study was 6 with a range of 0-11. Our finding is comparable to other studies by Riffat Jaleel and others^{11,12}. In 94% cases hysterectomy was for benign pathology. In USA 91.7% hysterectomies are for benign indication. The commonest presenting complaints in our study were menorrhagia followed by polymenorrhagia. It is well established that perimenopausal age group and high parity are associated with these symptoms. This was also seen by Shergill SK and Riffat Jaleel, who found that abnormal menstrual flow was the commonest complaint in 66% cases^{11,13}. In this study main indication for hysterectomy was leiomyoma 36(44.4%) cases. Similar is found in studies by Sujata et al and Leung PL followed by endometrial hyperplasia (16%), DUB (10%) cases^{4,14}. Commonest indication was fibroid and DUB (26%), in study by Shergill SK¹³. Jha R found that leiomyoma was the indication in 24.9% cases¹⁵. In contrast a study by G Gupta shows uterovaginal prolapse the most common indication followed by leiomyoma.¹⁶ Clark A has reported the commonest indication to be DUB (58%) followed by fibroids (23.2%)¹⁷.

Only few studies have compared pre-operative clinical diagnosis with histopathology of hysterectomy specimens. We have found that 72% of our pre-operative diagnosis were confirmed on histopathology like uterovaginal prolapse, Pelvic inflammatory disease, uterine polyps, malignant ovarian tumor and cervical polyp have 100% diagnosis confirmed on histopathology and same was reported by G Gupta et al¹⁶. Lee NC found that out of 1283 women studied, 80% of the pre-operative diagnosis was confirmed in the potentially confirmable group¹⁸. Millar studied 246 hysterectomy specimens and found that clinical diagnosis was confirmed in 50% cases. Chronic cervicitis is an extremely common condition in adult female, at least at the microscopic level, chronic cervicitis was commonest finding in our study 48(59.3%) which was an incidental finding. Same results were obtained by Gousia Rahim Rather et al⁹. Adenomyosis was the second common finding in 34(42%) cases. Adenomyosis is rarely diagnosed preoperatively and is still largely under diagnosed as it has no specific symptoms of its own^{19,20}. Transvaginal ultrasonography can be helpful in good hands in diagnosing adenomyosis²¹. In our study only 10(12.3%) cases were diagnosed preoperatively. Other cases have

presented either with menorrhagia or were incidental findings. Same was reported by Riffat Jaleel et al and Gousia et al. Leiomyoma was the third most common histopathological diagnosis 29(36%) in our study and was confirmed in 22(65%) cases. Its incidence is 25.8% in Saudi Arab, 78% in USA, 48% in Nigeria and 8% in Sweden²². Geographical and racial influences are thus apparent on the prevalence of uterine leiomyoma²³.

CONCLUSION

Histopathological analysis correlates well with preoperative clinical diagnosis for hysterectomy in most cases, further improvement is still needed. Benign pathologies are more common than their malignant counterparts hence conservative procedure like endometrial ablation, hormonal devices must be considered. Histopathology can diagnose unusual malignancies. Histopathology is thus mandatory for confirming diagnosis and thus ensuring optimal management in particular of malignant disease.

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