

Histopathological Patterns of Benign Lesions in Hysterectomy Specimen

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ABSTRACT

Aims: To audit and evaluate the surgical indications, routes of surgery and types of hysterectomies performed along with histopathological analysis of those hysterectomies in respect to disease of endometrium, myometrium, cervix and fallopian tubes and ovaries for benign conditions.

Methods: This is retrospective cross sectional study of all hysterectomy specimens received in the department of Pathology, B and C teaching hospital and research center, Jhapa, Birtamode, Nepal from May 2017 to May 2019. Clinical details were received from the data provided by gynecologists in histopathological requisition forms. Only specimens received for the benign indication for hysterectomy were taken.

Results: Out of 115 specimens, the number was equal on both abdominal and vaginal route. The common indications were leiomyoma (60%, n=69), abnormal uterine bleeding (24%, n=28) and uterine prolapsed in 11% (n=13). Uterovaginal prolapse was seen commonest indication for hysterectomy in age group of 5th and 6th decade of life. Myometrial pathology was seen in 74% (n=75) comprising mostly of leiomyoma. Endometrial pathology was present in 14% (n=16) and chronic non-specific cervicitis in 24% (n=28). Abnormal tubo-ovarian pathology was found in 40% (n=51).

Conclusions: Leiomyoma, abnormal uterine bleeding and uterovaginal prolapsed are the common benign conditions undergoing hysterectomy.

Keywords: genitourinary fistula, ureteric fistula, vault fistula

INTRODUCTION

Hysterectomy is the most common gynecological surgery performed over the world for various benign and malignant diseases. According to the center for disease control and prevention, about 5 per 1000 women undergo hysterectomy annually in the USA and one in four women will have hysterectomy by the age of 60 years.¹ Many treatment options have emerged for benign conditions including medical and conservative surgeries. It is now posing a serious question mark about the indications, probable overuse and justification of hysterectomy.² Several studies have been conducted and continue to be debatable owing to psycho-social, emotional, economic, sexual and medical significance to woman.³ Border et al conducted a study in USA and concluded that hysterectomies were found inappropriate for non-oncological and non-emergency cases.⁴

However, this may not be applicable to developing and underdeveloped countries like Nepal, where patients cannot have regular follow up to hospitals due to socio-economic conditions, unavailability of specialized doctors and health facilities within their reach and lack of modern technologies making them prone to overuse of hysterectomy. The study was done to assess and analyze the non-oncological lesions for which hysterectomy were performed.

METHODS

This is a cross-sectional retrospective study. The study included all benign hysterectomy specimens received in the Department of Pathology, B and C teaching hospital and research center, Birtamode, Jhapa, Nepal from May 2017 to May 2019.

All types of hysterectomy were included in the study i.e. subtotal hysterectomy, total abdominal

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hysterectomy, total abdominal hysterectomy with uni/bilateral salpingo-oophorectomy and vaginal hysterectomy. Cases were reviewed with previous histopathology reports obtained from the Department of Pathology. Clinical details were received from the data provided by gynecologists in histopathological requisition forms.

Histopathological diagnosis and the clinical diagnosis were obtained and tabulated. Further lesions were categorized as lesion of cervix, ovary and fallopian tubes, endometrium and myometrium.

RESULTS

A total of 115 non-oncological hysterectomies were performed during three years of period. total abdominal hysterectomy in 31 cases, total abdominal hysterectomy with bilateral salpingo-oophorectomy in 57 cases, total abdominal hysterectomy with unilateral salpingo-oophorectomy in 7 cases, subtotal hysterectomy in 7 cases and vaginal hysterectomy in 13 cases [Figure-1].

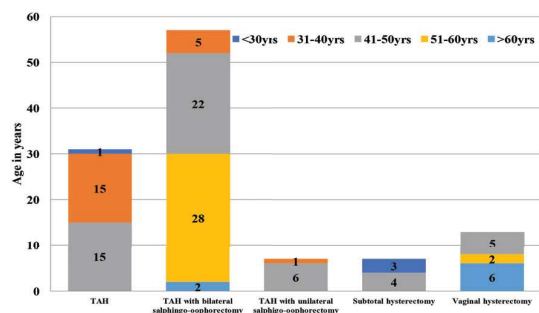


Figure-1: Bar diagram showing distribution of type of hysterectomy according to age

The mean age of patients in the study overall undergone hysterectomy was 48.3 years (range=22-74). Out of 115 cases, 52 (45.2%) were of the fourth decade followed by 30 (26.08%) of the fifth decade.

TAH with bilateral salpingo-oophorectomy was found commonest hysterectomy procedure which constituted 57 cases i.e. 49.56% of all hysterectomy specimens, followed by total abdominal hysterectomy 21 cases i.e. 18.26%.

The most common indication for hysterectomy was found to be leiomyoma for age group up to 4th decade i.e. 75%, 71.43% and 61.5% in <30 years, 31-40 years and 41-50 years respectively.

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constituted 57 cases i.e. 49.56% of all hysterectomy specimens, followed by total abdominal hysterectomy 21 cases i.e. 18.26%. The most common indication for hysterectomy was found to be leiomyoma for age group up to 4th decade i.e. 75%, 71.43% and 61.5% in <30 years, 31-40 years and 41-50 years respectively.

Uterovaginal prolapsed was seen commonest indication for hysterectomy in the age group of 5th and 6th decade of life. Leiomyoma was found to be the most common cause for DUB for which hysterectomies were performed, followed by adenomyosis and disordered proliferative endometrium in the age group of 4th to 6th decade [Table-1].

Table-1: Distribution of patients with type of hysterectomy and clinical indication

Age in years	Number of cases	Type of hysterectomy	Clinical Indication
<30	4	TAH (1) sTAH (3)	Uterocutaneous fistula (25%) Fibroids (75%)
31-40	21	TAH (15) TAH + BSO (5) TAH + USO (1)	Fibroid (71.43%) DUB (19.04%) Recurrent PID (4.76%) Ruptured uterus (4.76%)
41-50	52	TAH + BSO (22) TAH + USO (6) TAH (15) sTAH (4) VH (5)	Fibroid (61.53%) DUB (34.67%) Prolapse (3.85%)
51-60	30	TAH + BSO (28) VH (2)	Prolapse (46.67%) Fibroid (40%) DUB (13.33%)
>60	8	VH (6) TAH + BSO (2)	Prolapse (62.5%) Fibroid (12.5%) DUB (25%)

NB: TAH (total abdominal hysterectomy), BSO (bilateral salpingo-oophorectomy), USO (unilateral SO), sTAH (sub-TAH), VH (vaginal hysterectomy)

Endometrial pathology was present in 13.91% (16/115) hysterectomy specimens and histologically unremarkable (Proliferative, Secretory, and Atrophic endometrium) comprised of 84.34% (97/115). Endometrial hyperplasia (with and without atypia) comprised of 4.34% (5/115) [Table-2].

Table-2: Histopathological findings in the endometrium [n=115]

Histopathology of the endometrium	Total (%)
Proliferative endometrium	44 (38.2%)
Secretory endometrium	22 (19.13%)
Atrophic endometrium	31 (26.95%)

Endometrial hyperplasia without atypia	3 (2.6%)
Endometrial hyperplasia with atypia	2 (1.73%)
Disordered proliferative endometrium	3 (2.6%)
Endometritis	5 (4.34%)
Pill endometrium	3 (2.6%)
Endometrial polyp	2 (1.73%)

Myometrial pathology was seen in 75 cases out of 115 (73.9%), leiomyoma comprised of 69 (92%), adenomyosis 4 (5.3%) and leiomyoma with adenomyosis in 2 (2.66%) cases [Table-3].

Table-3: Histopathological findings in myometrium [n=75]

Histopathological lesion	N (%)
Leiomyoma	69 (92%)
Adenomyosis	4 (5.3%)
Leiomyoma with adenomyosis	2 (2.66%)

Chronic nonspecific cervicitis was the most common findings constituting 28 (24.35%) of total 115 cases of hysterectomy. Squamous metaplasia with cervicitis was seen in 11 (9.56%) and cervical leiomyoma in 2 (1.73%) of total 115 cases [Table-4].

Table-4: Histopathological findings in cervix [n=41]

Histopathological lesion	N (%)
Chronic cervicitis	28 (68.29%)
Chronic cervicitis with squamous metaplasia	11 (26.83%)
Leiomyoma	2 (4.88%)

Out of 115 cases in 64 cases, fallopian tubes and ovaries were removed. Most of the histopathological findings in fallopian tubes and ovaries were normal accounting 59.68% (51 cases) followed by nonspecific salphingo-oophoritis and endometriosis. Three cases i.e. 4.68% were diagnosed as ectopic tubal gestation [Table-5].

Table-5: Histopathological findings in fallopian tubes and ovaries [n=64]

Histopathological lesion	Total (%)
Normal histology	51 (59.68%)
Endometriosis	4 (6.25%)
Nonspecific salphino-oophoritis	6 (9.37%)
Ectopic tubal gestation	3 (4.68%)

DISCUSSION

Hysterectomy is the most common gynecological surgery performed worldwide. It provides a definitive cure for gynecological cases both benign and malignant diseases. The indication to perform

hysterectomy should always be justifiable. Thus, it is essential to prove its justification as this operation has its own physical, social, economic, emotional, sexual and medical significance to women.

In this study, 115 hysterectomies were performed for the non-oncological gynecological cases. The most common route was abdominal (88.6%) which was similar to study conducted by Bhat S et al (91.7%)⁵ and the most common procedure was total abdominal hysterectomy with bilateral salphingo-oophorectomy (57/115, 49.56%) followed by total abdominal hysterectomy without salphingo-oophorectomy (31/115, 26.96%). Similar to our study TAH with bilateral salphingo-oophorectomy was the most common type of hysterectomy in the study conducted by Verma D et al (50.65%)⁶, Tiwana KK et al⁷ and Toma A et al⁸ Histopathologically 59.68% (51/115) showed normal fallopian tubes and ovaries.

The mean age population of the patient was 48.3 years which is similar to the study conducted by Bhat S et al which was 46.6 years. The most common age group for hysterectomy was 41- 50 years, 45.21%.

Symptomatic fibroid uterus 54.78% (63/115) was the most common indication for hysterectomy which was all proven histopathologically and was also the commonest indication in various studies.⁹⁻¹³ Besides, adenomyosis were incidental findings in two of the cases of symptomatic fibroid uterus. Three cases were found histologically leiomyoma in cases indicated for prolapse and DUB.

The second most common indication for hysterectomy was DUB 24.34%(28/115) which was a low compared study conducted by Rather et al (35.43%)¹⁴ and Saleh et al (39%).¹⁵ DUB is the most common diagnosis in patients complaining or per uterine bleeding; it may be due to inadequate work-up, either due to financial constraints or the pressure of the patient to get the surgery done earlier.⁶ Studies conducted previously found that the actual diagnosis confirmed by histopathological examination were missed clinically with the pre-operative indication of DUB.^{7,16,17} Histopathological analysis showed adenomyosis in 4, submucosal leiomyoma 5, disordered proliferative endometrium 3, endometrial hyperplasia 5, proliferative endometrium in 9 cases.

Twenty-one cases (18.26%) out of 115 were of uterovaginal prolapse with the most common age

group of 51-60 years (66.66%, 14 out of 21 cases). This result was consistent with the data reported by Vaidya et al (18.95%)¹² and Nisa et al (19%).¹³ One each case was of the ruptured uterus, recurrent PID and utero-cutaneous fistula.

Pre-operatively none of the cases (4/115, 3.47%) were diagnosed as adenomyosis. This finding was in concordance with previous studies conducted by Verma D et al⁶, Tiwana et al.⁷ and Miller et al.²⁰ This strongly supports that histopathological analysis of hysterectomy specimens is mandatory even in non-oncological cases to confirm the pre-operative diagnosis and to justify hysterectomy.

Most of the findings in the cervix were histologically unremarkable accounting 64.43% (74/115). Forty-one cases out of 115 had pathology with distribution [Table 4].

Fifty-seven cases out of 115 i.e. 49.56% were of TAH with bilateral salphingo-oophorectomy and 7 were TAH with unilateral salphingo-oophorectomy (Fig. 1). This finding was concurrent with the study

conducted by Bhat S et al (51.81%).⁵ A total of 64 cases were histologically analyzed for pathology in fallopian tubes and ovaries. 51 cases i.e. 59.68% of the fallopian tubes and ovaries were normal and the rest of the histopathological findings were endometriosis, salphingo-oophoritis, and tubal ectopic gestation [Table-5].

In our study, only one case out of 115 cases i.e. 0.87% was of the emergency obstetrical cause which was of the ruptured uterus following prolonged obstructed labour. This value was low in comparison with the study conducted by Bhat Set al (5.64%)⁵ in Jammu and Kashmir, India 2017 and was similar to the study conducted by Shirodker SD et al in 2016, Maharashtra, Mumbai, India.²¹

CONCLUSIONS

The common indications for the hysterectomies with benign indications are leiomyoma, abnormal uterine bleeding and uterovaginal prolapse. Histopathological examination certainly justifies the clinician's decision making and appropriateness of the surgery in future.

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