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HISTOPATHOLOGY DIAGNOSIS IN WOMEN WHO UNDERWENT A HYSTERECTOMY FOR A BENIGN CONDITION.

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ABSTRACT… Objectives: To determine frequency of histopathological diagnosis in women who underwent hysterectomy for benign condition in tertiary care hospital. **Study Design:** Retrospective study. **Setting:** Department of Gynecology and Obstetrics, CMH Nowshera. **Period:** 6 months (July 2018 December 2019). **Material & Methods:** Data of all hysterectomies underwent in last 3 years was reviewed. Ethical approval was taken from ethical review board. Patients undergone hysterectomy with benign condition were included in study. Data was analyzed using SPSS version 24. Chi-square and correlation test was performed. P value ≤0.05 was considered significant. **Results:** Total 430 cases were included in study. Mean age of women was 37.1 years± 8.2 SD. Most common complaints was irregular bleeding 123(28.6%) following dysmenorrhea 78(18.1%). Most common histopathological finding was adenomyosis 214(49.8%), following leiomyoma 66(15.3%). Histopathological findings were significantly associated parity (p=0.000), type of hysterectomy (p=0.000), marital status (p=0.000) and occupation (p=0.000). Significant correlation between clinical diagnosis and histopathological finding was found (r= 0.7, p=0.00). **Conclusion:** Hysterectomy is most common surgical modality in gynecology. Adenomyosis is most common histopathological finding in patients undergone hysterectomy for benign condition. All hysterectomy specimens should be subjected to pre-operative and post-operative histopathological examination for accurate diagnosis and management in benign conditions.

Key words: Benign Condition, Histopathological Diagnosis, Hysterectomy.

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INTRODUCTION

Hysterectomy (uterus removal) is most common reason for non obstetric surgery in developed and developing world.[1] An estimated 5.1/1000 women above 15 years undergo hysterectomy in United sates every year.[2] Incidence of hysterectomy was 3.1/1000 women in Australia and 2.1 or 3.6/1000 women in Germany.[3] Prevalence of hysterectomy in low income countries varies from 1.7-9.8%.[4] Several medical and conservative surgical procedures exist now-a-days, but still hysterectomy is common surgical procedure in gynecology, worldwide.

Indications of hysterectomy include uterine prolapse, fibroids, chronic pelvic pains and dysfunctional uterine bleeding. Literature reported that hysterectomy variation is associated with race, socioeconomic status, education and insurance status of women. However, evidence exist that physician's gender, geographical location and surgeon's training are also associated with variation rates of hysterectomy.[5] Hysterectomy is reported as key health indicator of hospital performance in few reports. Hysterectomy is associated with its own mortality and morbidity; however, it is usually done to improve quality of life (QOF) of serious patients.[6]

Hysterectomy is divided into three main types abdominal, laparoscopic and vaginal. Abdominal hysterectomy is indicated in pelvic diseases (endometriosis or adhesions), uterus enlargement and gynecological malignancy.[7] Laparoscopic hysterectomy is associated with diagnosis and treatment of pelvic diseases. Laparoscopy is done to carry out adnexal surgery (removal of overies). It is associated with ability to secure

intraperitoneal homeostasis (at end of procedure) and rapid recovery.[8] Vaginal hysterectomy is most commonly used for prolapsed and menstrual abnormalities (when uterus size is fairly normal). Complications associated with hysterectomy include injuries to urinary bladder, ureter, rectum, anus and intestines. Other complications include vaginal cuff dehiscence, sexual dysfunction, urinary incontinence, bleeding, nerve injury, venous thromboembolic, gastrointestinal tract injury and genitourinary injury.[9]

Literature reported that histopathology from hysterectomy specimen is most commonly endometrium with hormonal imbalance while in 36.5% cases it is fibroids, adenomyosis, in 28% endometrial hyperplasia in 12% cases.[10]

Data available on histopathological diagnosis in women who underwent hysterectomy is not appropriate to reach any conclusive finding in Pakistan. Present study aims to determine frequency of histopathological diagnosis in women who underwent hysterectomy for benign condition in tertiary care hospital.

MATERIAL AND METHODS

A retrospective study was conducted at department of gynecology and obstetrics, CMH Nowshera. Study duration was 6 months (July 2018 December 2019) Data of all hysterectomies underwent in last 3 years was reviewed. Ethical approval was taken from ethical review board.

Inclusion criteria was based upon age >25 years and women undergone hysterectomy for benign condition. Exclusion criteria were based upon hysterectomy done for malignant condition, patients with metabolic disorders, cardiovascular diseases, liver diseases and acute kidney injury. SPSS version 24 was used for data analysis. Mean and standard deviation was reported for quantitative variables. Frequency and percentages were reported for qualitative variables. Correlation and Chi-square test was applied. P value ≤0.05 was considered significant.

RESULTS

Total 430 cases were included in study. Mean age of women was 37.1 years± 8.2SD. There were 52(12.1%) patients in age group 25-30 years and 378(87.9%) in >30 years age group. There were 200(46.5%) women with parity ≤ 2 and 230(53.5%) had > 2 parity. Marital status was married in 309(71.9%) women and unmarried in 121(28.1%). Out of all 430(100%), 164(38.1%) were working women while 266(61.9%) were house wives. Most common complaints was irregular bleeding 123(28.6%) following dysmenorrhea 78(18.1%), prolapse 53(12.3%), white discharge 48(11.2%), polymeorrhoea 48(11.2%), menorrhea 32(7.4%), abdominal pain 30(7%) and post menopausal bleeding 18(4.2%). Type of hysterectomy was abdominal in 358(83.3%), vaginal 51(11.9%), and total abdominal hysterectomy with salpingo-oopherectomy in 21(4.9%) patients. Clinical diagnosis was given in Figure-1.

Most common histopathological finding was

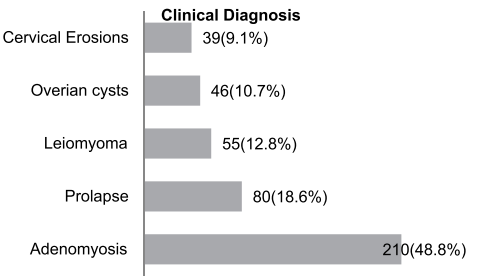

Figure-1. Clinical diagnosis (pre-operative)

adenomyosis 214(49.8%), following leiomyoma 66(15.3%), leiomyoma+ adenomyosis 32(7.4%), benign ovarian cyst 31(7.2%), Fibroids 24(5.6%), chronic cervicitis 21(4.9%), endometrial hyperplasia 21(4.9%) and no specific pathology 21(4.9%) as shown in Table-I.

Histopathological Findings	Number (N=430)	Frequency (100%)
Adenomyosis	430	49.8%
Leiomyoma	66	15.3%
Leiomyoma + adenomyosis	32	7.4%
Benign ovarian cysts	31	7.4%
Chronic cervicitis	21	4.9%
Fibroids	24	5.6%
Endometrial hyperplasia	21	4.9%
No specific pathology	21	4.9%

Table-I. Histopathological findings of women underwent hysterectomy for benign condition

Histopathological findings were significantly associated parity (p=0.000), type of hysterectomy (p=0.000), marital status (p=0.000) and occupation (p=0.000). Significant correlation between clinical diagnosis and histopathological finding was found (r= 0.7, p=0.00) as shown in Table-II.

Independent Variables	R	P-Value
Clinical diagnosis	0.7	0.00
Age	1.2	0.54
Marital status	1.5	0.65
Parity	1.7	0.34

Table-II. Correlation between histopathological findings and other independent variables

DISCUSSION

Total 430 hysterectomy cases were included in study. Mean age of women was 37.1 years± 8.2SD. There were 52(12.1%) patients in age group 25-30 years and 378(87.9%) in >30 years age group. Results of present study were followed by Haynes et al. they reported that age group >30 years is more prone to indicate hysterectomy as compare to younger age group (p=0.01).[11]

In present study, type of hysterectomy was abdominal in 358(83.3%), vaginal 51(11.9%), and total abdominal hysterectomy with salpingo-oopherectomy in 21(4.9%) patients. Parzeller et al reported that total abdominal hysterectomy was most common type of hysterectomy in benign condition.[12] However, Fanning et al reported that patients with benign malignancies were more prone to undergo laparoscopic hysterectomy as compare to vaginal hysterectomy (p=0.01).[13,14]

In present study, most common histopathological finding was adenomyosis 214(49.8%), following leiomyoma 66(15.3%), leiomyoma+ adenomyosis 32(7.4%), benign ovarian cyst 31(7.2%), Fibroids 24(5.6%), chronic cervicitis 21(4.9%), endometrial hyperplasia 21(4.9%) and no specific pathology 21(4.9%). Kovac al reported similar findings, they reported that adenomyosis was most common histopathological finding following fibroids (65% and 20% respectively).[15] Deval et al reported that leiomyoma and endometrial hyperplasia were most common histopathological findings as compared to fibroids (p=0.00).[16]

In present study, histopathological findings were significantly associated parity (p=0.000), type of hysterectomy (p=0.000), marital status (p=0.000) and occupation (p=0.000). Donnez et al reported that no significant relationship was found in histopathological findings and occupation (p>0.05).[17] However, Gendy et al reported that histopathological finding has significant association with parity (p=0.01).[18]

In present study, significant correlation between clinical diagnosis and histopathological finding was found (r= 0.7, p=0.00). Agdi et al reported that no correlation was found in clinical diagnosis and histopathological findings of patient's undergone hysterectomy.[19] Moreover, Hur et al reported that patients with benign malignancies had positive correlation between histopathological findings and critical diagnosis (p=0.01, r=0.5), age (p=0.03, r=0.6) and complication (p=0.05, r=0.7).[20]

Retrospective study design limits generalizability of study.

CONCLUSION

Hysterectomy is most common surgical modality in gynecology. Adenomyosis is most common histopathological finding in patient's undergone hysterectomy under benign condition. All hysterectomy specimens should be subjected to pre-operative and post-operative histopathological examination for accurate diagnosis and management in benign conditions.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
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2	Amna Fareed	Same as above	
3	Saira Nazeer	Same as above	
4	Saifullah Khan	Data collection and proof reading.	
5	Shah Gul Khan	Data collection and proof reading.	