ORIGINAL ARTICLE

Histopathological Analysis of Hysterectomy Specimen

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ABSTRACT

Aim: To observe incidence of different pathologies in hysterectomy specimens in different age groups and corelate with preoperative daignosis.
Study design: Retrospective observational study
Place and duration of study: Department of Obstetrics & Gynaecology and Pathology, Rehman Medical Institute Peshawar from 1st July 2015 to 31st August 2016
Methods: Three hundred and sixty six patients were included with age range from 30-70 years. All the hysterectomy specimens sent to our department were included. Clinical data about age, reproductive status, history, clinical diagnosis, type of surgical intervention was recorded from patient's record file. All the specimens were fixed in 10% formalin and tissue sections were taken for processing and paraffin block preparation.
Results: The most common age group undergoing hysterectomy was between 35-50 yrs (80%) with mean age of 42.5 years. Twenty (5.4%) cases were from very young age<35 years. 53(14.4%) belonged to postmenopausal age group(50-70yrs).In first group (<35years) the most common clinical presentation was menorrhagia in 8(2.1%) followed by dysfunctional uterine bleeding (DUB) 7(1.9%). Second group (35-50 years) constituted the maximum no of specimens 293(80%). The most common reasons for seeking medical help in this group were same as first group like menorrhagia 145(39.6%), DUB 138(37.7%).
Conclusion: Most common indication for hystrectomy in reproductive and perimenopausal group is abnormal uterine bleeding and post menopausal vaginal bleeding in post menopausal age group.liomayoma and adenomyosis were most frequent patholigies seen on histopathological analysis in reproductive age group while , in post menopausal premalignant and malignant liesions were common.
Keywords: Hysterectomy, Histopathology, Analysis

INTRODUCTION

Hysterectomy, surgical removal of uterus is the most frequently performed major gynecological surgery in all obstetrics and gynaecology settings. Hysterectomy is definitive management for wide range of benign and malignant conditions of female reproductive tract, including fibroid, adenomyosis, dysfunctional uterine bleedings, uterine prolapse, post-partum hemorrhage and malignant lesions of uterus, ovaries and cervix[1]. First total hysterectomy was performed by Charles Clay in 1929 in England[1,2]. Since then it is second most common surgery after cesarean section[3]. Although hysterectomy is ultimate treatment of many pathology but advancement in imaging technique for diagnosis and advent of novel treatment like endometrial ablation, uterine artery embolization, hysteroscopic myomectomy, MRI focused ultrasound fibriodablation, radiofrequency ablation and hormonal IUD (mirina), many hysterectomies can be prevented.

MATERIAL AND METHODS

This retrospective observational study was conducted in Department of Obstetrics & Gynecology and Pathology, Rehman Medical institute (RMI) Peshawar over a period of one year from July, 2015 to August 2016.Total 366 patients were included in the study with age range from 30-70 years. All the hysterectomy specimens sent to our department during this study period were included. Clinical data about age, reproductive status, history, clinical diagnosis, type of surgical intervention was recorded from patient's record file. The specimens were grossed by the pathologists. All the specimens were fixed in 10% formalin and tissue sections were taken for processing and paraffin block preparation. The paraffin blocks were sectioned and stained by H & E stain. Microscopical examination was performed for histopathological diagnosis. Histopathological diagnosis were analyzed and compared with clinical diagnosis.

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RESULTS

The most common age group undergoing hysterectomy was between 35-50 years (80%) with mean age of 42.5yrs. Twenty (5.4%) cases were from very young age<35 years. Fifty three (14.4%) belonged to postmenopausal age group (50-70 years) [Table 1]. In first group (<35 years) the most common clinical presentation was menorrhagia 8(2.1%) followed by dysfunctional uterine bleeding (DUB) 7(1.9%), mass abdomen 3(0.8%). Ovarian mass was preoperative diagnosis in only 2(0.54%) patients (Table 2).

Histopathological finding in patients with mass abdomen and menorrhagia were fibroid 11(3%) corelating well with clinical findings. Out of 7 DUB cases 4(1.09%) showed chronic cervicitis and 3(0.8%) showed

adenomyosis, thus not justifying the hysterectomy. One case had ca ovary and one had simple ovarian cyst (Table 3). Second group (35-50 years) constituted the maximum no of specimens 293(80%). The most common reasons for seeking medical help in this group were same as first group like menorrhagia 145(39.6%), DUB 138(37.7%), mass abdomen 6(1.6%) and few cases of ovarian mass 4(1.09%) [Table 4].

The most frequent histopathology seen in this group was leiomyomas 124(33.8%) followed by adenomyosis 109(29.7%).The next frequent findings were secretory phase endometrium and chronic cervicitis 32(8.7%) and cervical squamous metaplasia 14(3.8%) both reflecting hormonal imbalance or DUB. Endometrial hyperplasia was seen in 5(1.4%), ovarian mass in 8(2.1%) where 5 were malignant and 3 benign. Only one specimen showed ca cervix (Table 5).

Total of 53(14.6%) specimens were received from post-menopausal group (50-70 years). The clinical presentation common to this group was post-menopausal vaginal bleeding 47(12.8%) or pyometra 6(1.6%) (Table 6).The histopathological analysis found ca endometrium as most common occurrence 20(5.46%) followed by atrophic endometrium and chronic cervicitis 18(4.9%). Seven (1.9%) showed endometrial hyperplasia out of which 4 were simple and 3 were atypical representing pre-cancerous condition. Three (0.8%) specimens showed benign endometrial polyp and 2 ca cervix (0.54%). There was only one case of fibroid, adenomyosis and ca ovary each. Histopathology analysis justified the predominance of pre malignant or malignant pathology in this group and hence hysterectomy (Table 7).

Table 1: Freuency of age (n=366)

Age (years)	No.	%
<35	20	5.4%
35-50	293	80%
50-70	53	14.6%

Table 2: Clinical presentation and histopathalogical findings (n=366)

Clinical presentation	No.	%
Menorhagia	8	2.1
DUB	7	1.9
Mass abdomen	3	0.8
Ovarian mass	2	0.54

Table 3: Histopathological findings (age <35yrs)

Finding	No.	%
Fibroids	11	3.0
Adenomyosis	3	0.8
Secretory endometrium with cervicitis (DUB)	4	1.08
Ca ovary	1	0.27
Simple ovarian cyst	1	0.27%
Total	20/366	5.4%

Table 4: Age group: 35-50 years (n=293)

Clinical presentation	No.	%
Menorhagia	145	39.6
DUB	138	37.7
Mass abdomen	6	1.6
Ovarian mass	4	1.09
Total	293/366	80.0

Table 5: Histopathalogical findings (35-50) years (n=293)

Clinical presentation	No.	%
Fibroids	124	*33.8*
Adenomyosis	109	29.7
Secretory endometrium with cervicitis (DUB)	32	8.74
Cervical squamus cell metaplasia	14	3.8
Endometrial hyperplasia	5	1.4
Ovarian mass	8	2.1
Ca cervix	1	0.27
Total	293/366	80.0

Table 6: Age group 50-70 years (n=53)

Clinical presentation	No.	%
Postmenopausal bleeding	47	12.8
Pyometra	6	1.63%
Total	53/366	14.6

Table 7: Histopathological findings (50-70years (n=53)

Finding	No.	%
CA endometrium	20	5.46
Atrophic endometrium&chronic cervicitis	18	4.9
Endometrial hyperplasia	7	1.91
Benign endometrial polyp	3	0.8
CA cervix	2	0.54
CA ovary	1	0.27
Adenomyosis	1	0.27
Fibroid	1	0.27
Total	53/366	14.6

DISCUSSION

Hysterectomy is an ultimate treatment of many female genital tract problems but decision for hysterectomy in reproductive age group is still a challenge for both patient and gynaecologist. For many benign conditions uterus preserving modalities are now available so after making proper diagnosis using advance imaging techniques one can reduce number of hysterectomies especially in reproductive age group. Age range was 30-70 years in the present study, maximum number of patients 293(80%) were seen in 35-50 years age group. In an analysis of 150 cases by Harsha et al[4] most cases were of same age group. Various studies done by Rather et al[5], Ramachandran et al[6] and Ajmera et al[7] had similar findings.

Fifty three (14.6%) cases presented with post-menopausal bleeding in the age group of 50-70 years, where the most common pathology was carcinoma endometrium followed by atrophic endometritis and endometrial hyperplasia with atypia. This finding is similar tone of study[8]. Incidence of atrophic endometrium was 18(4.9%) cases, which is commonly the pathology of the postmenopausal females The incidence of endometrial hyperplasia with or without atypia was similar to the studies done earlier[9,10].

The most common indication for hysterectomy in reproductive group (30-50 years), was leiomyomas followed by adenomyosis, which is in agreement with various other studies[11,12]. Khan et al[13] and Khaniki et al[14] also reported fibroid to be most common indication in their study while in a study done by Rizviet.al[15], adenomyosis was the commonest pathology 46.34% followed by leiomyoma 41.46%. Jha et al[16] stated that it was uterovaginal prolapse and Abdullah et al[17] reported

previous or present malignancy as most common clinical indication of hysterectomy in their study.

The most common clinical diagnosis in our study was dysfunctional uterine bleeding 145 cases (39.6%) in reproductive age group but true cases were only 32(8.7%). While the rest of the patients operated with this preoperative diagnosis were found to have adenomyosis, atypical endometrial hyperplasia, endometrial polyp and endometrial carcinoma. These findings were missed preoperatively. It is because Pre-operative clinical diagnosis may not always be possible without histopathology in many cases like adenomyosis, endometritis, hyperplasia, early stage malignant uterine lesion .Clinical examination and radiological evaluation may diagnose fibroid uterus, polyps, prolapsed uterus, cervical/ovarian pathology, and pregnancy related complications. In more than 50% cases pre operative diagnosis of DUB is made and only histopathology shows adenomyosis[9]. Various previous studies have found that the actual diagnosis confirmed by histopathological examination was missed pre operatively in the majority of cases operated with the preoperative indication of DUB[18,19]. This result emphasizes the fact the pre-operative diagnosis of DUB should be made only after comprehensive and necessary investigations are done.

Chronic cervicitis was the commonest histopathology found in the cervix of all the hysterectomy specimens. In our study 54(14.7%) cases were diagnosed as secretory endometrium and chronic cervicitis The which was almost similar to that found in various previous studies done on other nations[20,21].

However, removal of ovaries without the suspicion of any pathology seems to be unnecessary, because removal of ovaries leads to estrogen hormone deficiency, hastens up the menopause and patient's psychosexual health is affected. Bilateral oophorectomy is a routine in our unit after 42 years age in patients undergoing hysterectomy for other reasons. In all the ovarian specimens, cysts of variable morphology were the most common pathology noted. Majority were simple follicular cysts. Incidence of the functional ovarian cysts was similarly high in other studies[22].The number of ovarian pathology in the present study was 14(3.8%)where 50% were benign and 50% malignant, which was close to the incidence quoted by Jha et al in their study[14].

CONCLUSION

Abnormal uterine bleeding and post-menopausal bleeding are most common indications for hysterectomy. Large number of hysterectomy specimens had significant findings thus justifying hysterectomy. Most of postmenopausal specimen shows either premalignant or malignant changes so early decision for hysterectomy is justified. Clinicopathological correlation in all cases of hysterectomy has been proved to be important to improve the clinical outcome and post-operative management. While in reproductive age group majority of histopathologies were benign and for which effective non-surgical management options are now available. So precision in pre-operative diagnosis is of utmost importance before embarking on hysterectomy and without consideration of uterine preserving treatment modalities. Ovarian pathologies were seen less commonly so routine oophorectomy should be avoided in patients less than 45 years

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