Spectrum of Uterine corpus lesions in hysterectomy specimens

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ABSTRACT

Background: The Uterus is subjected to various disorders, which include inflammatory, hyperplastic and neoplastic disorders. Many treatment options are available including medical and conservative surgical but hysterectomy still remains the most common gynaecological procedure performed worldwide.This study was conducted to know the incidence of various uterine corpus lesions in Abdominal hysterectomy specimens and to know the age wise distribution of the lesions.

Materials & Methods: This is a seven years study, conducted in the department of Pathology, Kurnool Medical college, Kurnool. This study included five years retrospective (1998-2002) and two years prospective study (January 2003 – December 2004). The inclusion criteria was abdominal hysterectomy specimens with uterine corpus lesions, exclusion criteria was vaginal hysterectomy specimens, cervical, ovarian and tubal pathology lesions.

Results: Total cases studied were 622 and age range was 19 to 66 years. Most common age group encountered was 30-39 years, comprising 316 cases, making 50.8% of total cases. Most common uterine corpus lesion observed was Leiomyoma, seen in 443 cases(71.2%), followed by Adenomyosis, 87 cases (13.9%), endometrial polyp, 46 cases(7.4%). In malignant lesions of uterine corpus most common malignant lesion was Endometrial Carcinoma. Other malignant lesions received were three cases of Endometrial Stromal Sarcoma, one case of Carcinosarcoma.

Conclusion: Most common uterine corpus lesion was Leiomyoma followed by Adenomyosis.In malignant disorders most common was Endometrial carcinoma.

Keywords: Hysterectomy, Uterine corpus lesions, Leiomyoma, Adenomyosis, Endometrial polyp, Endometrial carcinoma.

INTRODUCTION

The adult nulliparous uterus is a hollow, pear shaped organ that weighs 40-80g and measures 7-8cm along its longest axis. It is divided into cervix and the corpus.The uterine cavity has a triangular shape.It is lined by the endometrium, which is surrounded by a thick muscular layer (myometrium).The endometrium and the myometrium are of mesodermal origin and are formed secondary to fusion of the mullerian ducts between the 8th and 9th postovulatory weeks.

The uterus is subjected to various disorders, which include inflammatory,hyperplastic and neoplastic disorders.Many treatment options are available including medical and conservative surgical but hysterectomy still remains the most common gynaecological procedure performed worldwide.[1] It is the definitive cure for many of its indications which include dysfunctional uterine bleeding, fibroids and gynaecological cancers.[2] Historically, Charles Clay performed the first subtotal hysterectomy in Manchester England in 1843 and the first Total abdominal Hysterectomy was done in 1929. There are many indications for hysterectomy and the uterus can be removed using any of a variety of techniques and approaches, including abdominal, vaginal, or laparoscopic.In most cases, a total hysterectomy with removal of the uterine corpus and cervix is done; but in recent years, there has been a resurgence in the popularity of supracervical hysterectomy.[3] The ovaries and tubes may or may not be removed along with the uterus, depending on the patient's age and a variety of other factors. However, there are significant variations in hysterectomy rates within the united states and throughout the world. This variation in rates from one location to another is due to several factors, including patient expectations and availability of medical care. But it is primarily related to the training and practice patterns of the local gynaecological surgeons. In some areas, abnormal uterine bleeding may be managed primarily by hormonal therapy, whereas in other locations, hysterectomy may be recommended.[3]

MATERIALS AND METHODS

This is a seven years study, conducted in the department of pathology, Kurnool Medical College, Kurnool.This study included Five years retrospective (1998-2002) and two years prospective study (January2003-December2004).

The inclusion criteria for the study was uterine corpus pathology of endometrium and myometrium through abdominal hysterectomies with or without salphingoopherectomy.The exclusion criteria was vaginal hysterectomy specimens, cervical, ovarian and tubal pathology lesions.Among the retrospective cases,those cases were excluded which had inadequate records.

In prospective study the uterine specimens were properly labelled, numbered and fixed in 10% buffered formalin. After the thorough gross examination of the specimens, multiple bits were taken from representative sites.These bits were processed manually. Finally slides prepared were stained with Hematoxylin and Eosin and mounted.

For retrospective cases all information used in the study was obtained from the records of Department of Pathology, Kurnool Medical College and Hospital, Kurnool.

RESULTS

In this study 622 uterine specimens were included.The subjects were distributed over a wide age range of 19 to 66 years.The most common age encountered was between 30-39years, 316cases (50.8%) (Table 1). Followed by 40-49 years age group in which 237 cases(38%) have occurred (Table 1).The most common pathology observed was Leiomyoma,443 cases(71.2 %)(Table 1)(Figure 1). Interstitial type of Leiomyoma is the most common type,381 cases (86%) compared to submucosal and subserosal type(Table2).

Table 1: Age-wise distribution of uterine corpus lesions.

Age group in years	10-19	20-29	30-39	40-49	50-59	≥ 60	TOTAL
Chronic non specific Endometritis	-	-	4	-	-	-	4
Tuberculous Endometritis	1	-	-	-	-	-	1
Endometrial Hyperplasia	-	-	-	2	2	-	4
Adenomatous Polyp	-	1	31	14	-	-	46
Leiomyoma	-	37	221	170	11	4	443
Adenomyosis	-	3	48	36	-	-	87
Leiomyoma+ Adenomyosis	-	-	12	10	-	-	22
Endometrial Carcinoma	-	-	-	1	-	6	7
Endometrial Stromal Sarcoma	-	-	-	2	1	-	3
Adenofibroma	-	-	-	-	1	-	1
CarcinoSarcoma	-	-	-	-	1	-	1
Invasive Mole	-	3	-	-	-	-	3
TOTAL	1	44	316	235	16	10	622

Table2 :Agewise distribution of leiomyoma types

Age group in years	10-19	20-29	30-39	40-49	50-59	>-60	TOTAL
Sub Mucosal Leiomyoma	-	7	25	11	3	1	47
Interstitial Leiomyoma	-	28	189	155	7	2	381
Subserosal Leiomyoma	-	2	7	4	1	1	15
TOTAL	-	37	221	170	11	4	443

Second most common lesion affecting uterine corpus was adenomyosis which was seen in 87 cases.In 22 cases both leiomyoma and adenomyosis were observed. Endometrial polyps was seen in 46 cases.Other lesions encountered were seven cases of endometrial carcinomas , four cases of endometrial hyperplasia, three cases of Endometrial Stromal sarcoma(Figures 2 & 5), three cases of Invasive Mole,one case of Adenofibroma(Figures 3 & 6), one case of Carcinosarcoma (Figure 7), four cases of chronic non specific endometritis and one case of Tuberculous endometritis (Figure 4).

Figure 1: Gross of Leiomyoma

Figure 2: Gross of Endometrial Stromal Sarcoma

Figure 3: Gross of Adenofibroma

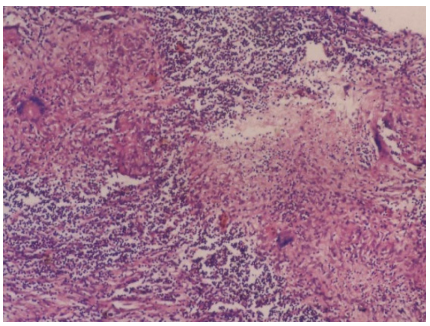

Figure 4: Microphotograph of Tuberculous Endometritis(H&E,10X)

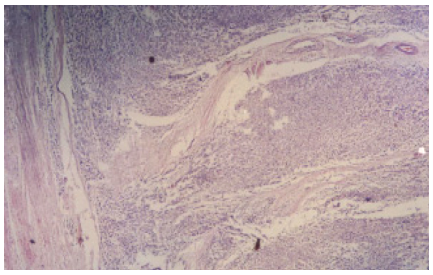

Figure 5: Microphotograph of Endometrial Stromal Sarcoma(H&E,10X)

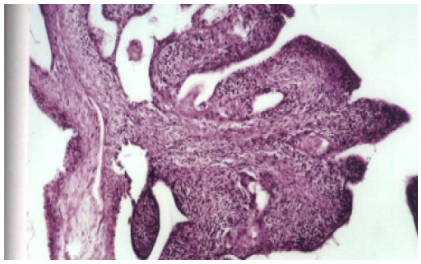

Figure 6: Microphotograph of Adenofibroma(H&E,40X)

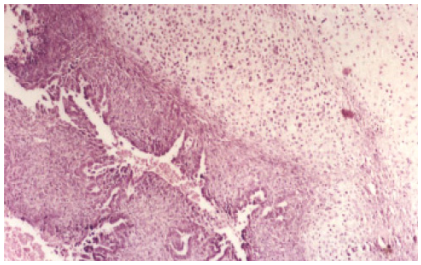

Figure 7: Microphoto graph of Carcinosarcoma

DISCUSSION

Hysterectomy is a successful operation in terms of symptom relief and patient satisfaction and provides definitive cure to many diseases involving uterus as well as adnexae.[4] Only few studies were conducted regarding histopathological analysis of uterine corpus lesions in abdominal hysterectomy specimens.

This study was conducted to know the incidence of various uterine corpus lesions in Abdominal Hysterectomy specimens and to know the age wise distribution of the lesions. Total cases studied were 622, out of these malignant lesions were 11.This indicates the incidence of malignant lesions (1.77%) in uterine corpus was very low .

Most common age group encountered was 30-39 years, comprising 316 cases, making 50.8% of total cases. In this age group all the lesions were benign, no subject had a malignant lesion in this age group.Next common age group involved was 40-49 years,where 235 cases(37.8%) were seen.But in other study conducted by Chandralekha J et al, 40-49yrs was the common age group involved in uterine corpus lesions.[5]

Leiomyomas are the most common uterine neoplasms.[6,7] In our study also Leiomyomas were common, which were observed in 443 cases (71.2%) which is similar to other studies.[5,8,9,10,11] These tumors occur subserosally, intramurally(interstitial type) or submucosally and produce symptoms referable to their size and location. In our study Interstitial type of Lieomyomas(381cases,86%) were most common type followed by submucosal leiomyomas (47cases,10.6%) and subserosal leiomyomas(15cases,3.4%).

Second most common lesion was adenomyosis, 87(13.9%) cases. This is similar to Chandralekha study[5], in that study incidence of Adenomyosis was 18.02%. Adenomyosis is rarely diagnosed preoperatively and is still largely under diagnosed as it has no specific symptoms of its own.[12] It is usually diagnosed after hysterectomy by histopathological examination.[13] But symptoms tend to be more severe in women with deep myometrial involvement.[14] In this study out of 87 adenomyosis lesions 84 cases occurred in 30-39 & 40-49 years age group. Only 3cases observed between 20-29 years.In this study 22 cases(3.53%) revealed the presence of both leiomyoma and adenomyosis. Other studies also reported this association.[15,16] In Chandralekha study, the incidence of cases associated with both Leiomyoma and Adenomysis was high, making 16.36% of cases.[5]

Amongst the endometrial pathologies,endometrial polyp was the commonest pathology (46cases,7.4%) in our study and the same was reported in other studies[17,18] where as Rather et al have reported a lower incidence.[19]We have received 4cases(0.64%) of endometrial hyperplasias, where as the study conducted by Sajjad et al showed endometrial hyperplasia in 3.1% of cases.[18]

In malignant lesions of uterine corpus most common malignant lesion observed was endometrial carcinoma.This typically occurs in elderly individuals,80% being postmenopausal at the time of diagnosis.[20] In our study out of total seven endometrial carcinoma cases, six cases occurred above 60years of age group, one case in 40-49years age group. When we observed abdominal hysterectomy specimens in older age group patients (above 60years),most common lesion was Endometrial carcinoma. From this age group, we received 10 specimens , in 6 cases(60%) endometrial carcinoma was diagnosed, in 4 cases(40%) leiomyoma was diagnosed. This indicate in this age group abdominal hysterectomy was indicated most commonly for malignant disorders.

When we observe the incidence of uterine corpus lesions in abdominal hysterectomy specimens in younger age group between 10-19, incidence is very low. In 10-19years age group we received only one case. This case was tuberculous endometritis and patient age was 19years.Four cases of chronic non specific endometritis was observed in the age group of 30-39years age group. Also received three cases of invasive mole, all these three cases have occurred in the age group of 20-29 years.Rare cases like Endometrial Stromal Sarcoma was seen in three cases, one case CarcinoSarcoma and one case of Adenofibroma were also observed.

CONCLUSION

The present study provides a fair insight into the histological patterns of uterine corpus lesions in abdominal hysterectomy specimens in our institution. Most common lesion among all is Leiomyoma followed by Adenomyosis. In malignant disorders most common was Endometrial Carcinoma.

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How to cite this article : Sharadrutha A, Janaki M. Spectrum of Uterine corpus lesions in hysterectomy specimens. Perspectives in Medical Research 2017;5(2):54-58.

Sources of Support: Nil, Conflict of interest: None declared.