

Is Microscopic Assessment of Macroscopically Normal Uterovaginal Prolapse Hysterectomy Specimens Necessary? - A Study In Konaseema Region

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ABSTRACT

Introduction: Hysterectomy for symptomatic genital prolapse accounts for about 15% of hysterectomies performed. The study is to know whether the histopathological examination of the hysterectomy specimens is really necessary? Hence this study was undertaken to evaluate clinical and histopathological correlation of uterovaginal prolapsed specimens, there by establishing acceptable clinical conditions for hysterectomies and also to study various histomorphological features to evaluate different patterns of lesions in the female genital tract.

Material and methods: A total number of 50 uterine prolapse specimens received in the department of Pathology for the given time period are studied for their histomorphological features and correlated with the clinical findings documented in the case record forms.

Results: In present study majority of the cases were obtained from premenopausal women (60%). Majority of the cases were of grade two prolapse (70%) followed by grade three. Histopathological examination showed chronic non specific cervicitis in 44 cases (88%). Three cases showed cervical intraepithelial neoplasia grade I changes and proclidental changes were seen in three cases. The final histopathological diagnosis shows no malignant changes in any of the specimens. Twenty one cases showed other changes like CIN1, Adenomyosis, leiomyoma, proclidental changes along with chronic non specific cervicitis.

Conclusion: We concluded that examination of such uteri reveals significant pathology in very few cases. In the present study all the leiomyomas which were diagnosed are incidental and macroscopically the specimens look normal, Hence microscopic examination of these Hysterectomy specimens is necessary, sometimes which changes the management protocol and prognosis of the patient.

Keywords: Prolapsed Uterus, Histopathological Examination, Cross Sectional Study, Cervical Intraepithelial Neoplasia, Adenomyosis, Leiomyoma

INTRODUCTION

Uterovaginal prolapse (UVP) is defined as the protrusion or herniation of pelvic organs into or out of vagina due to a failure of the anatomic supports. It may involve cervix and uterus, or vaginal vault, anterior or posterior vaginal walls, and the adjacent structures like bladder, urethra, rectum or contents of the pouch of Douglas.¹

In Konaseema region (coastal area of Andhra Pradesh), a higher incidence and a more severe degree of uterovaginal prolapse occurs in women who are delivered at home by untrained mid wives. Another reason for a high incidence of prolapse is that circumstances force the poor women to resume their heavy work soon after delivery without any rest or pelvic floor exercise. Cases delivered by caesarean section hardly ever

develop prolapse.

Hysterectomy is the treatment of choice for UVP. But there is a long time debate regarding the necessity of histopathological examination of the specimens after the surgery. Various studies at different regions have shown various results on this issue.²⁻⁴ Lot of controversy and inconclusive facts regarding this issue and lack of such type of study in this region has made me to take up this study.

The study is to know whether the histopathological examination of the hysterectomy specimens is really necessary. Hence this study was undertaken to evaluate clinical and histopathological correlation of uterovaginal prolapsed specimens, there by establishing acceptable clinical conditions for hysterectomies and also to study various histomorphological features to evaluate different patterns of lesions in the female genital tract of prolapse cases.

Macroscopically normal uterovaginal prolapse hysterectomy specimens were received for histopathological examination and studied to identify malignancies, changes in the cervical stroma and some other adverse outcomes which will change the treatment modality thereby showing the role of histopathological examination after the surgery.

Aims and objectives were to know the role of histopathological examination in hysterectomy specimens of uterine prolapsed, to correlate the clinical diagnosis with histomorphological features and to assess the risk of unanticipated malignancies in uterovaginal prolapse specimens.

MATERIAL AND METHODS

It is a Hospital based and Cross sectional study done at tertiary care hospital in konaseema region (coastal area of Andhra Pradesh). Hospital is serving predominantly rural population in Konaseema area with state of the art health care facilities where the hysterectomies are done judiciously and for absolutely necessary clinical indications.

Study Sample: A total number of 50 uterine prolapse specimens received in the department of Pathology for the given time

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period are studied for 2 months for their histomorphological features and correlated with the clinical findings documented in the case record forms.

Inclusion criteria

For uniformity and convenience 50 uterovaginal prolapse hysterectomy specimens received in the Department of Pathology, during the study period are included.

Exclusion criteria

1. Cervical biopsies and endometrial biopsies were excluded from the study.
2. Separately received amputated cervix, oophorectomy specimens, myomectomy specimens were excluded from the study.
3. Hysterectomy specimens with bilateral salpingo oophorectomy are excluded for convenience and to maintain uniformity.
4. Hysterectomy specimens of other surgical indications excluding uterovaginal prolapse.

Procedure: Macroscopic changes if any present were noted before preparation for microscopic examination. The specimens are fixed in 10% formalin overnight and gross examination of the specimen is done and tissue bits are taken from the pathologically suspicious areas. These tissues are taken from cervix, endometrium, myometrium and in salpingo-oophorectomy specimens and further these are passed through graded alcohol for dehydration. Before embedding the tissues, alcohol should be removed from them by treating it with xylene; then these are embedded in paraffin wax using metallic L (leuckhart's) moulds. The paraffin embedded blocks are then trimmed by sectioning with rotary microtome; relevant sections are stained with hematoxylin and eosin and studied microscopically using Olympus binocular microscope. These finding are noted in case record forms and the information was further analyzed to study the risk of malignancies and stromal changes in cervix.

Baseline data and clinical details were collected from the hospital records (case sheet of the patient) and were correlated.

Study variables: Age of the subject, menopausal status, malignant or pre malignant changes (present or not).

STATISTICAL ANALYSIS

Collected data is entered in MS excel sheet. It was analyzed by tests of significance i.e., chi square test and t test for qualitative and quantitative variables.

RESULTS

A total of 50 Hysterectomy specimens operated for uterine prolapse were received in the histopathology section in Department of Pathology during the study period May 2014 to June 2014.

In present study, prolapse was most common in women greater than 40 years of age with the 16 cases seen in less than 40 years age group.

Histopathological examination of these prolapse cases was valuable in detecting the following lesions in the uterus and its adnexa. The bar diagram (Figure-1) shows the findings in cervix.

Chronic non specific cervicitis (CNSC) were seen in 44 cases

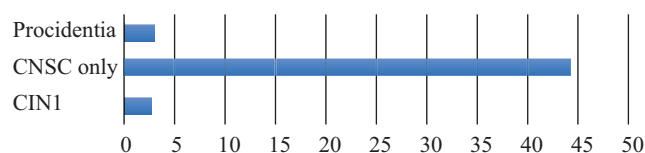


Figure-1: Findings in cervix

Histopathological diagnosis	Number of cases	Percentage
Adenomyosis	8	16
CIN1	3	6
Chronic non specific cervicitis alone	29	58
Leiomyoma	7	14
Procidential changes	3	6

Table-1: histopathological diagnosis

(88%). Three cases showed cervical intraepithelial neoplasia grade I changes and procidential changes were seen in three cases.

In present study majority of the cases were obtained from premenopausal women (60%) and 40 % are postmenopausal women. Out of 50 hysterectomy specimens, in all the cases the surgical indication was genital prolapse. Majority of cases (70%) were grade 2 according to clinical grading of prolapsed followed by grade 3 (24%) and grade 1 (6%).

The final histopathological diagnosis of all the 50 cases was shown in table-1. There were no malignant changes in any of the specimens. Almost all the cases showed chronic non specific cervicitis. Twenty one cases showed other changes like CIN1, Adenomyosis, leiomyoma, procidential changes along with chronic non specific cervicitis.

DISCUSSION

Uterus as the child bearing organ with regular menstrual bleeding is usually identified as an essence of woman hood. It is quite natural that, after hysterectomy, many of the patients feel that they are not women any more. This procedure is very common in peri menopausal and post menopausal women. It forms a definitive treatment for pelvic pathology including non-neoplastic and neoplastic lesions affecting the female reproductive tract. It is the second most common surgical procedure in USA.⁵ According to a report about 5 per 1000 women undergo hysterectomy annually in USA and 1 in 4 women will have hysterectomy by the age of 60 years.⁶ Hysterectomy is not a standard recommended practice even in modern medicine and is often seen as a last resort or recommendation. With many successful pharmacological treatment and alternative minimally invasive surgeries available, the rate of hysterectomy should be reducing in number. Even when the surgical treatment is compulsory, within the limitations there exist 3- 4 kinds of hysterectomies with varying degrees of post operative effects. The kind of hysterectomy to be done depends on the specific condition of the patient. Hysterectomies can alter the biological and sexual clock of the women with long term adverse consequences.

In the present study, over a period of 2 months, 50 hysterectomies operated for uterine prolapse were received in the department were analyzed. Hysterectomies were more commonly performed in the age group of 40-49 years (42.35%). This is similar to the findings reported by Singh et al⁷, Perveen et al⁸, Gupta et al⁹ and

Study	Qammarun- nisa et al ¹¹	Abdullah et al ¹²	Weaver et al ¹³	Gupta et al ⁸¹	Present study
Average age (years)	45	49	42.5	45.6	42.14

Table-2: Comparative table of average age at hysterectomy

Type of leiomyoma	Number of cases	Percentage
Sub mucosal	0	0
Sub serosal	5	10
Intramural	4	8

Table-3: Distribution of leiomyoma

Adelusola et al¹⁰ in their respective studies.

The mean age at which hysterectomies was performed in present study was 42.14 years. The table-2 shows the mean age of hysterectomies in other studies.

Kameshwari et al¹⁴ in their commentary on the medical ethical aspects of hysterectomies in Andhra Pradesh observed that the average age at which surgeries were done was 28.5 years. Thirteen percent of the population in the age group 36- 40 years had undergone hysterectomy. Sixty percent of women had hysterectomies before the age of 30 years.

It is relevant to examine hysterectomies of prolapsed uteri. Mahajan et al² in 2011 evaluated 253 hysterectomies done for prolapse cases and noted incidental findings in 30.4% of cases. In this they detected 2 cases of CIN and 1 case of TB endometritis which were clinically significant. They concluded that examination of such uteri reveals significant pathology in very few cases. Schouwink¹⁵ too had similar findings to report in their study of 221 hysterectomies done for prolapse. No malignancies were detected in his study. CIN-I was found in 7 cases. In contrast, the present study showed incidental findings in 36% of cases. Many of these were significant from the patient management point of view. These included 3 cases of CIN-I, 7 cases of Leiomyoma and 8 cases of adenomyosis.

Pre menopausal women with utero-vaginal prolapse and normal bleeding patterns or with negative evaluation for abnormal uterine bleeding have a minimal risk of abnormal gynaecological pathology. In post menopausal women without bleeding, the risk of unanticipated uterine pathology is 2.6 % as reported by Frick et al⁴ in 2010. In the present study majority of the cases were obtained from premenopausal women (60%) and all the cases had normal bleeding patterns.

Leiomyomas are benign smooth muscle neoplasms arising in and around the uterus. Though smooth muscle in nature by origin, they have varying degree of fibrosis apparent grossly and microscopically rendering them to be called as fibroids. Fibroids are very common benign neoplasms affecting the females for centuries. Surprisingly for more than a century there has been hardly any major research on the causes of fibroid. Most of the fibroids are asymptomatic, those which are symptomatic may be presenting as abnormal uterine bleeding, mass per abdomen, infertility etc. Treatment innovations have been slow perhaps because many women are asymptomatic.^{16,17}

What looks grossly like a fibroid with a whorled, well circumscribed appearance could possibly be a leiomyoma, an epithelioid leiomyoma, an endometrial stromal tumor or a leiomyosarcoma. Most of the leiomyomas can either be single or multiple. Multiple tumors are noted in 84% of women.^{16,17} In the present study all the leiomyomas which were diagnosed are incidental, Hence microscopic examination of these lesions

is necessary which appears normal macroscopically. Table-3 shows the distribution of types of leiomyoma in the present study.

Adenomyosis is a non neoplastic condition in which endometrial glands are found deeper than 1mm in the myometrium.¹⁸ In the normal state, the junction between the endometrium and the myometrium is not delineated by any limiting layer or membrane and endometrial glands and stroma are often found making some minor incursions into the myometrium. "Superficial adenomyosis" is a term that has been used to describe myometrial invasion that is greater than this normal amount and "adenomyosis" is the presence of endometrium even deeper in the wall of the uterus.¹⁸ The distance to which the endometrium extends into the myometrium has often been expressed in terms of the number of microscopic fields from the definable junction; one medium (100x) field has been suggested as the minimum needed for a diagnosis. Alternatively, the depth of penetration of the endometrial tissue into the myometrium can be expressed as a proportion of the overall thickness of the myometrium. This seems arbitrary but 25% has been suggested.¹⁸ In the present study eight cases showed Adenomyosis (16%)

The term "chronic cervicitis" often conveys different images to the clinician, colposcopist and pathologist. It is almost universal to find some degree of chronic inflammatory cell infiltrate, predominantly plasma cells with some lymphocytes, in the superficial cervical stroma, but it is only when the infiltrate becomes dense that it is justifiable to use the term 'chronic cervicitis' in the correct, pathological sense. The term chronic follicular cervicitis is used when the stroma is densely infiltrated by lymphocytes, with prominent lymphoid follicles.¹⁹ In this study almost all the cases (100%) showed features of chronic non specific cervicitis

Adekunle and Samaila in their study on prevalence of CIN in Zaria noted that CIN I accounted for 3.6%, CIN II 0.8% and CIN III 0.4% of all cases with a combined prevalence of 48 per 1000.²⁰ In the present study three cases showed (6%) CIN I changes.

Greene and Heatley in their study of 71 hysterectomy specimens stressed the importance of examining the entire cervix histologically when there is a previous history of CIN. They noted that a persistent CIN lesion was seen in 18 cases. Also in 8 cases with high grade CIN, micro invasive disease was noted. This study supports the continuing practice of examining the entire cervix in hysterectomy specimens.²¹ The present study also supports to examine the macroscopically normal uterine prolapsed cases microscopically to find the incidental findings which changes the management protocol and prognosis of the patient.

CONCLUSION

Although hysterectomies are being performed both judiciously at places and indiscriminately at other places, the tissue sample thus obtained helps in justifying the need for the procedure by providing conclusive histological diagnosis. Hence the clinicopathological correlation of hysterectomies forms a back bone of

gynecological practice

To conclude, It is relevant to examine hysterectomies of prolapsed uteri. In our study, hysterectomies done for prolapse cases and noted incidental findings in 36% of cases. No malignancies were detected in this study. CIN-I was found in 6% cases. 14% cases of Leiomyoma and 16% cases of adenomyosis. Many of these were not that significant from the patient management point of view. We concluded that examination of such uteri reveals significant pathology in very few cases. In the present study all the leiomyomas which were diagnosed are incidental and macroscopically the specimens look normal, Hence microscopic examination of these Hysterectomy specimens is necessary, sometimes which changes the management protocol and prognosis of the patient.

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