



CLINICOPATHOLOGICAL AND RADIOLOGICAL COMPARISON OF ADENOMYOSIS IN HYSTERECTOMY PATIENTS – A RETROSPECTIVE STUDY

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ABSTRACT

BACKGROUND : Hysterectomy - The most commonly performed gynaecological surgery throughout the world

AIMS AND OBJECTIVES : This study aims at comparing the clinical, radiological and histopathological diagnosis of adenomyosis in hysterectomy patients.

MATERIALS AND METHODS : A retrospective study was done on the 120 hysterectomy specimens received from August 2018 – August 2019 at the Pathology department in Ahalia Diabetes hospital.

RESULTS AND DISCUSSION : Our study shows 100% of the clinical and radiological cases of adenomyosis and combined leiomyoma with adenomyosis were diagnosed by the histopathological examination.

KEYWORDS : Hysterectomy, Adenomyosis, Histopathology Radiology

INTRODUCTION :

Hysterectomy- The most commonly performed gynaecological surgery throughout the world.(1). Uterus – One of the most important reproductive organ in the human life which not only carries another life but also is affected by many benign and malignant disorders. Karl Freiherr Von Rokitansky described in 1860 (2) in the German literature as "fibrous tumors containing gland like structures that resemble endometrial glands," and by Cullen in 1920 (3) as "endometriosis with predominantly presence of fibromuscular tissue," and by Sampson in 1921 (4) distinguishing three types of adenomyosis. As adenomyosis could only be diagnosed definitively on histological specimens obtained after hysterectomy, the estimated incidence in retrospective studies varied between 5%-70% (5) and differences in prevalence are due to the criteria used. Charles Clay performed first subtotal hysterectomy in 1843 and first total hysterectomy in 1929 in England (6,7) . A classical histological definition for adenomyosis is the invasion of the myometrium by endometrial glands and/or stroma, deeper than 2.5 mm from the endometrial –myometrial junction, accompanied by adjacent smooth muscle hyperplasia. Different opinions are seen in the definition of the disease ranging from the simple disruption of the endometrial –myometrial junction to a depth more than 8 mm or even relating the necessary depth of invasion to the myometrial thickness (8). Despite the high prevalence of adenomyosis, the possibility of a prehistological diagnosis and the severity of the symptoms with which the women present , the pathogenesis of adenomyosis is not well understood (9). Radiologically, Junctional zone thickening or hyperplasia and focal lesions of the junctional zone have to be interpreted carefully as changes of the junctional zone can be either due to the cyclic hormonal variations or due to the thickening of the junctional zone by aging (10,11). A number of minimally invasive surgical options for hysterectomy exist at present. But restricted availability and cost factor limit them from being widely used (12) even though it has increased number of adverse effects including longer recovery time, and higher initial health care costs compared with uterine sparing procedures (13,14). Majority of the hysterectomy procedures are performed via an abdominal approach (64%) -Total abdominal hysterectomy and Total abdominal hysterectomy with Bilateral salphingo-oophorectomy, or vaginal route (22%) - Vaginal hysterectomy with pelvic floor repair, and by laparoscopy (14%) - Total laparoscopic hysterectomy or LAVH laproscopic assisted vaginal hysterectomy Jacoby et al. (15)

magnetic resonance imaging have shown high levels of accuracy for the noninvasive diagnosis of adenomyosis (16,17) hysterectomy and microscopic evaluation of the samples are still the only ways of definite diagnosis of adenomyosis (18).

Here we are conducting a retrospective study of hysterectomy specimens in the period from August 2018 – August 2019 with a purpose to compare clinical and radiological diagnosis of adenomyosis with the histopathological examination.

MATERIALS AND METHODS :

A retrospective study was done on the 120 hysterectomy specimens received from August 2018 – August 2019 at the Pathology department in Ahalia Diabetes hospital. The hysterectomy specimens received by the Pathology department were properly labeled, numbered and fixed in 10% buffered formalin. After a detailed gross examination of the specimens, multiple bits were taken from representative sites, processed and paraffin blocks were made. The blocks were sectioned and stained routinely with hematoxylin and eosin. Cases of malignancies, and those with medical records showing other medical conditions were excluded from the study. Transabdominal, transvaginal and pelvic floor ultrasonography were done for the respective cases.

We analyzed the cases by recording age, menstrual symptoms , associated symptoms for clinical evaluation, clinical indication of hysterectomy and Ultrasonographic evaluation was recorded. Histopathological reports of the hysterectomy specimens were correlated with preoperative diagnosis.

RESULTS :

A total of 120 hysterectomy cases were studied. Age of the patients range from 20 – 70. Most of the patients fall under the age group of 41 – 50. The largest group was of perimenopausal age (41-50 years) contributing 46 % of total cases in the study (Table 1).

Table 1: agewise Distribution Of Cases

AGE	NO OF CASES (n = 120)	PERCENTAGE
21 – 30	0	0%
31 – 40	30	25%
41 – 50	55	46%
51 – 60	33	27%
61 - 70	2	2 %

Although various methods such as ultrasound scan and

Submitted : 08th May,2019

Accepted : 09th August,2019

Publication : 15th October, 2019

Of the 120 cases we received, 48 cases were diagnosed as leiomyoma, 42 with adenomyosis, 20 with leiomyoma and adenomyosis and 10 with prolapse uterus. Transabdominal, transvaginal and pelvic floor ultrasonography were done for the suspected cases.

TABLE 2: Clinical, Radiological And Histo Pathological Distribution Of Cases

DIAGNOSIS	CLINICAL (n=120)	USG (n=120)	HISTOPATHOLOGY (n=120)
Adenomyosis	42 (35%)	35 (29%)	32 (27%)
Leiomyoma	48 (40%)	45 (37%)	45 (37%)
Leiomyoma with adenomyosis	20 (17%)	15 (13%)	18 (15%)
Prolapse uterus	10 (8%)	10 (8%)	10 (8%)
Others		15 (13%)	15 (13%)

Table 3: Clinical And Histopathological Comparison

DIAGNOSIS	CLINICAL	HISTOPATHOLOGY
ADENOMYOSIS	42	32
LEIOMYOMA	48	45
LEIOMYOMA WITH ADENOMYOSIS	20	18
PROLAPSE UTERUS	10	10
OTHERS	-	15

Table 4 : Radiological And Histopathological Comparison

DIAGNOSIS	ULTRASOUND	HISTOPATHOLOGY
ADENOMYOSIS	35	32
LEIOMYOMA	45	45
LEIOMYOMA WITH ADENOMYOSIS	15	18
PROLAPSE UTERUS	10	10
OTHERS	15	15

Out of the 42 cases of clinically diagnosed adenomyosis, 35 cases were diagnosed as adenomyosis ultrasonographically and only 32 were proven histopathologically. Other 10 cases were negative for adenomyosis histopathologically. Of the 20 cases diagnosed clinically as combined leiomyoma with adenomyosis, only 15 cases diagnosed the same ultrasonographically and 18 were diagnosed histopathologically. Prolapse uterus in the cases diagnosed clinically were diagnosed same in ultrasonographically and histopathologically.

DISCUSSION :

In a cross-sectional retrospective study Kim and Strawn [19] reported that the hysterectomy specimens of 64 patients out of the 182 participants (35.2%) had adenomyosis and these patients were in the age range of 25–52 years.

Most common lesion in our study is leiomyoma, accounting 32% of all cases in histopathology. Our finding correlates with Gupta et al (7), Khan et al (20), Qamar-Ur-Nisa et al (21).

In our study, the incidence of adenomyosis was 27%. The overall prevalence of adenomyosis was determined to be 27%, which correlates with the previous reports (22,23). Of the total hysterectomies, 27% showed incidence of adenomyosis which correlates with the study done by Isoglu et al (24) where 30.23% of the hysterectomy cases were diagnosed as adenomyosis.

Diagnosis of adenomyosis on clinical findings is usually different. The difficulty in diagnosing adenomyosis clinically is due to the lack of strong positive pathognomonic signs and/or clinical findings (25). Our study shows 100% of the clinical and radiological cases of adenomyosis and combined leiomyoma with adenomyosis were diagnosed by the histopathological examination. 31% of the cases which

were clinically diagnosed as adenomyosis and 9% of the cases which were radiologically diagnosed as adenomyosis were proven to be negative in histopathological examination. 11% of the combined leiomyoma with adenomyosis cases diagnosed clinically were found to be negative in the histopathology. 17% of the combined leiomyoma with adenomyosis cases which were proven in the histopathological examination were undiagnosed radiologically. Pre-operative clinical diagnosis always may not be possible because in many cases histopathological examination of endometrium is the key for pathological evaluation (26)

CONCLUSION:

Though recent advances are on its way for the better diagnostic work up of adenomyosis, histopathology still stay ahead for the final confirmatory diagnosis.

CONFLICT OF INTEREST:

None .

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