

## Analysis of Histopathological Examination of Lesions in Hysterectomy Specimens in a Tertiary Care Hospital: A Five Year Study

Dr Deepika Dhruw<sup>1</sup>, Dr Kasturi Chikhlikar<sup>2</sup>, Dr Avinash Meshram<sup>3</sup>

<sup>1</sup>Assistant Professor, Department of Pathology, Lt. BRKM Government Medical College, Jagdalpur, India.

<sup>2</sup>Assistant Professor, Department of Pathology, Lt. BRKM Government Medical College, Jagdalpur, India.

<sup>3</sup>Professor & Head of Department, Department of Pathology, Lt. BRKM Government Medical College, Jagdalpur, India.

Corresponding Author - Dr Kasturi Chikhlikar

---

**Abstract:** Hysterectomy is one of the most common gynaecological procedures done in the females worldwide as it provides definitive cure to a wide range of gynecological diseases, both benign and malignant. The cause for hysterectomy being done varies from country to country and region to region. The most frequent indications for hysterectomy are Fibroids, Abnormal Uterine Bleeding and Uterovaginal prolapse. Histopathological analysis of the hysterectomy specimens is mandatory for diagnostic purposes and to assess the pattern of lesions common in the uterus and adenexa. The objective of this study is to present the Histopathological patterns of various uterine and adnexal pathologies in the hysterectomy specimens and also to correlate its pre-operative clinical diagnosis with Histopathology

**Keywords:** Hysterectomy; Fibroid; Uterovaginal prolapse; Adenomyosis; Abnormal Uterine Bleeding.

---

Date of Submission: 15-04-2019

Date of acceptance: 30-04-2019

---

### I. Introduction

Hysterectomy is the most common Gynaecological procedure performed worldwide<sup>1,2,3</sup>. Charles Clay performed the first subtotal hysterectomy in Manchester, England in 1843. Total abdominal hysterectomy was done in 1929<sup>4,5</sup>. Now a days histopathological analysis is very essential for the diagnosis of lesions of uterus, cervix and adnexa<sup>6</sup>. Uterus is subjected to many benign and malignant disease like Fibroids, Adenomyosis, Pelvic Inflammatory Disease, Tumours<sup>1,6</sup>. Leiomyoma is the commonest neoplasm affecting females in reproductive age group<sup>8</sup>. Most frequently encountered complaint is abnormal uterine bleeding<sup>9,10</sup>. We regularly receive hysterectomy specimens in our institute.

### II. Materials And Method

Our study is a Retrospective hospital based study conducted in Department of Pathology, Lt. BRKM Government Medical College, Jagdalpur, Chattisgarh. Its duration is 5years i.e from January 2014 to December 2018 . Sample size is 1000 cases. The samples studied consist of all the hysterectomy specimens received in the histopathology section in the Department of Pathology. Patients of 25-75 years age group were included.

As per protocol, on receiving the specimens, they were properly labeled, numbered and fixed in 10% buffered formaline. Large specimens were cut and after appropriate fixation for 10-12 hours, gross features were recorded. Multiple representative bits were taken, processed and paraffin embedded blocks were prepared.

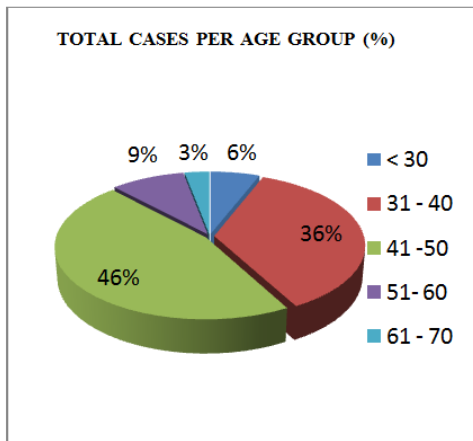
Tissue sections from these blocks were then stained with Hematoxylin and Eosin stains. After thorough microscopic examination a histopathological diagnosis was given. Brief clinical data with respect to age, parity, clinical manifestation and clinical diagnosis was obtained from histopathological requisition forms and clinical record files.

### III. Result

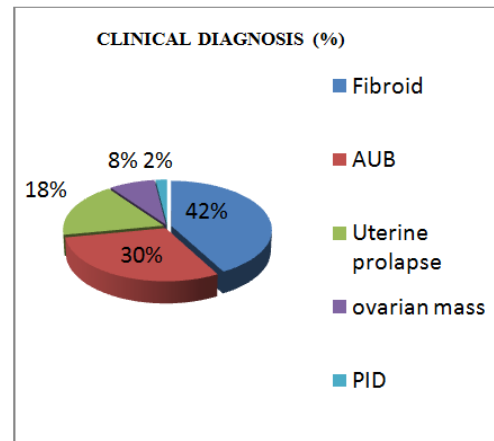
We included the age range 25- 70 years. In our study, the most common age group in which hysterectomy done was 41-50 years i.e. 46%, followed by 31-40 years i.e.36%. Most common clinical diagnosis was fibroid i.e. 42%, then AUB i.e. 30% and after this uterine prolapse i.e. 18%. In histological analysis of Endometrium cases shows unremarkable features i.e. 38% Secretory Endometrium, 25% Proliferative phase, 8% Secretory hyperplasia, 12% Atrophic Endometrium and 8% cases showed pathology, i.e. 0.5% Adenocarcinoma, 0.5% Endometriosis, 2% Endometrium polyp. In histological analysis of Myometrium, most common lesion was Leiomyoma i.e.56.4% followed by Adenomyosis 13.4%, 7% cases showed Metastatic

Tumour. In Cervix, most common lesion was Chronic Cervicitis i.e. 77.8%. In Ovaries, 82% cases showed Functional Cyst. 96.8% showed unremarkable histology in Fallopian Tube.

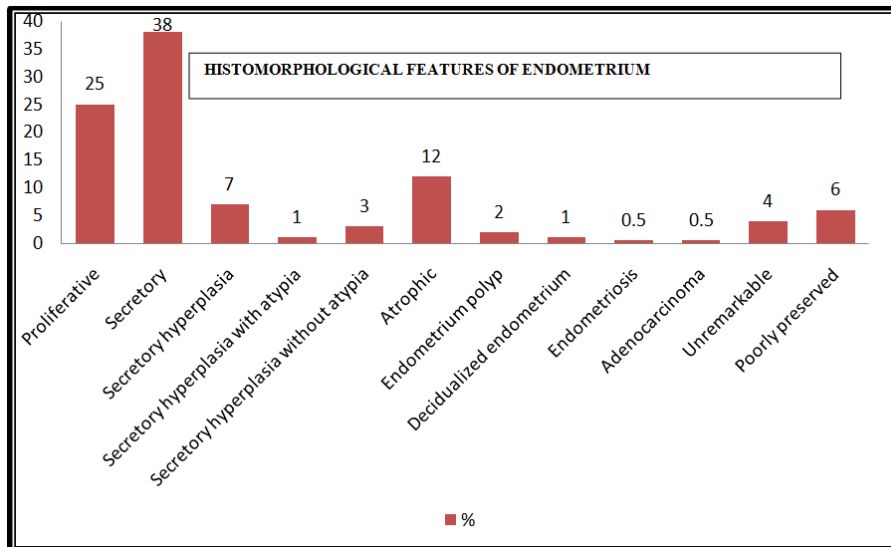
**Chart No. – 1**



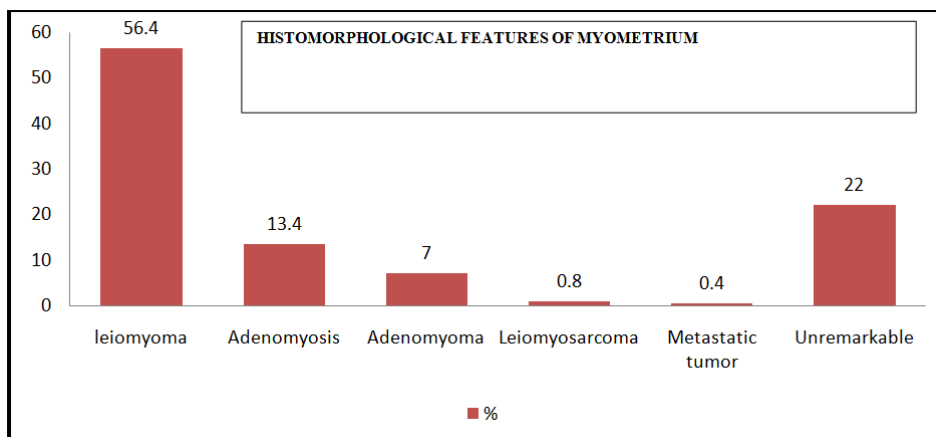
**Chart No. – 2**



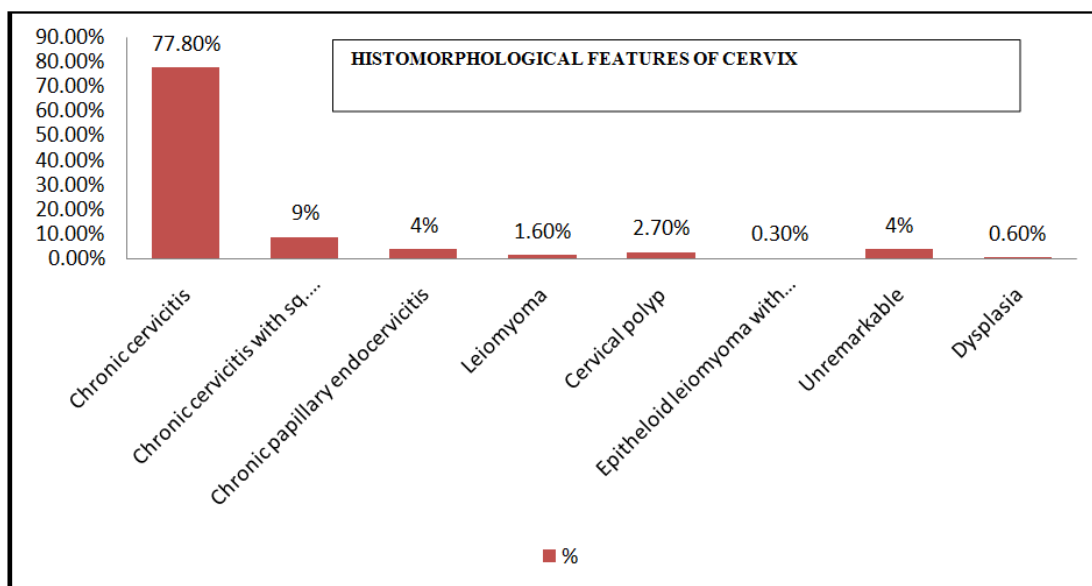
**Chart No.– 3**



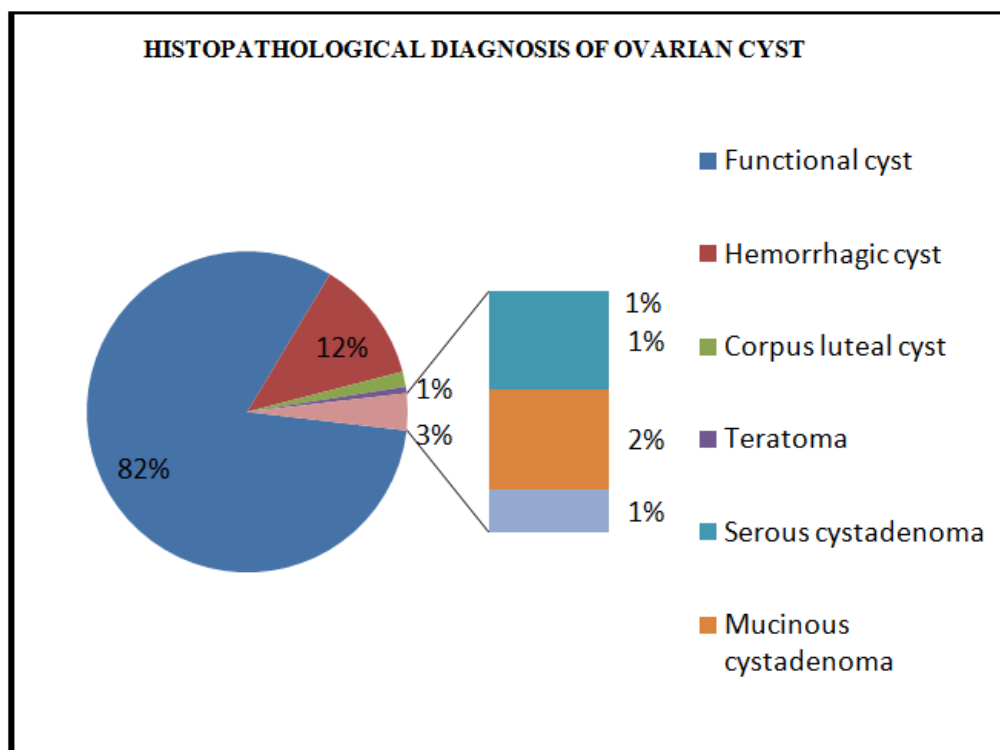
**Chart No. – 4**



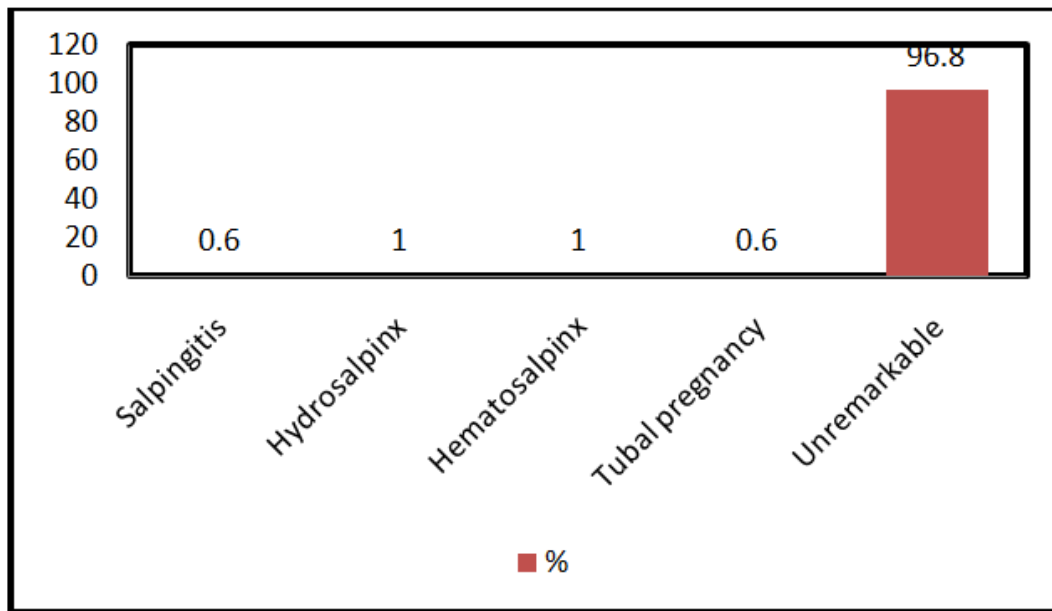
**Chart No. – 5**



**Chart No. – 6**

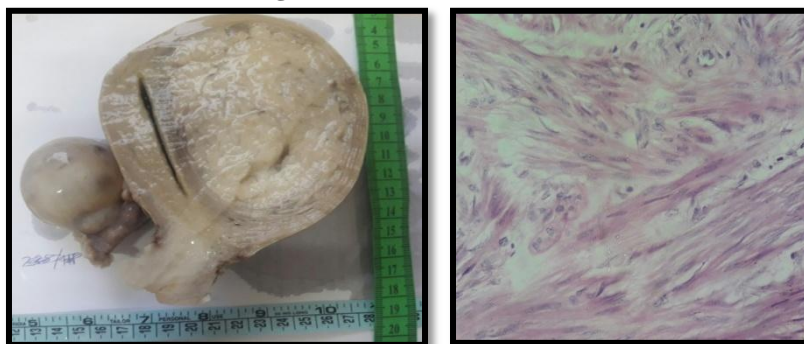


**Chart No. – 7**  
**HISTOPATHOLOGICAL DIAGNOSIS OF FALLOPIAN TUBE LESIONS**



**GROSS AND MICROSCOPIC PICTURES**

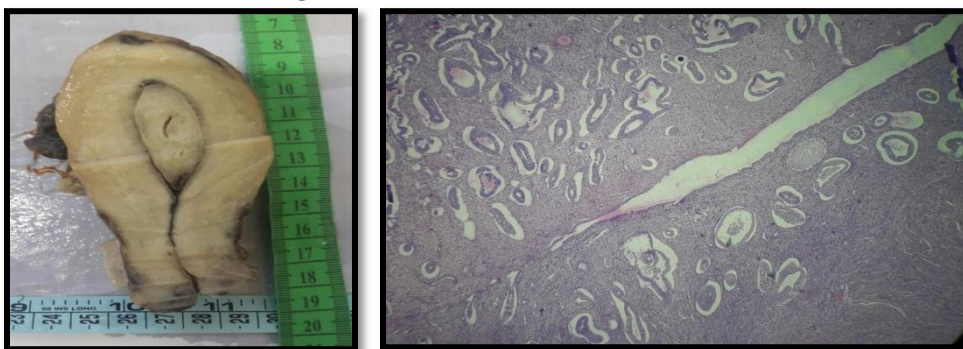
**Figure No. – 1 LEIOMYOMA**



**Figure No. – 2 ADENOMYOSIS**



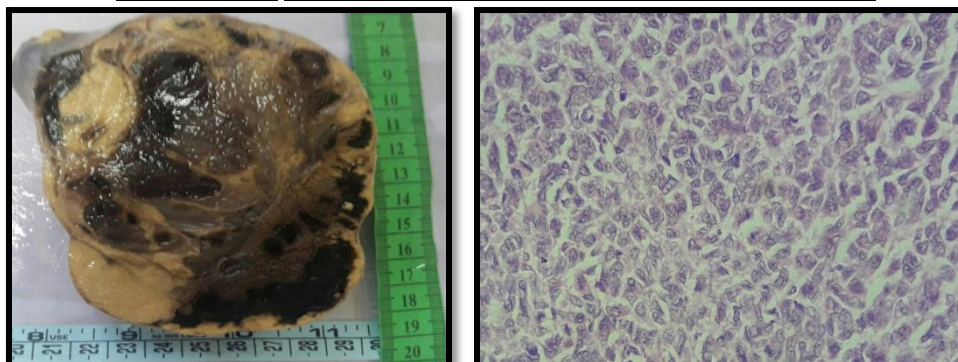
**Figure No. – 3 ENDOMETRIAL POLYP**



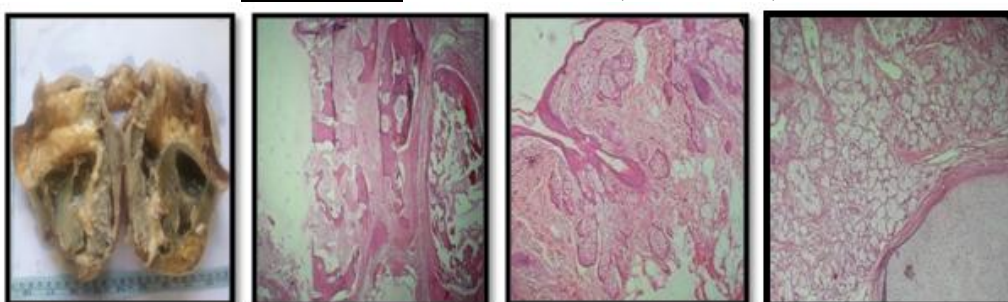
**Figure No. – 4 ENDOMETRIAL HYPERPLASIA**



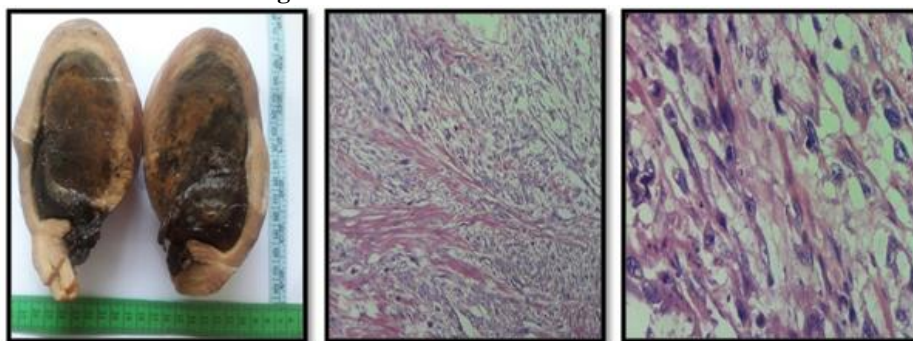
**Figure No. – 5 OVARIAN MASS( GRANULOSA CELL TUMOR)**



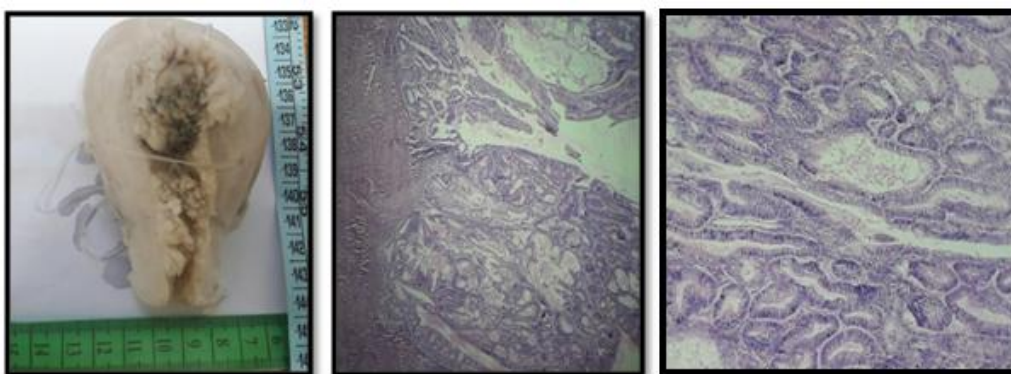
**Figure No. – 6 DERMOID CYST (TERATOMA)**



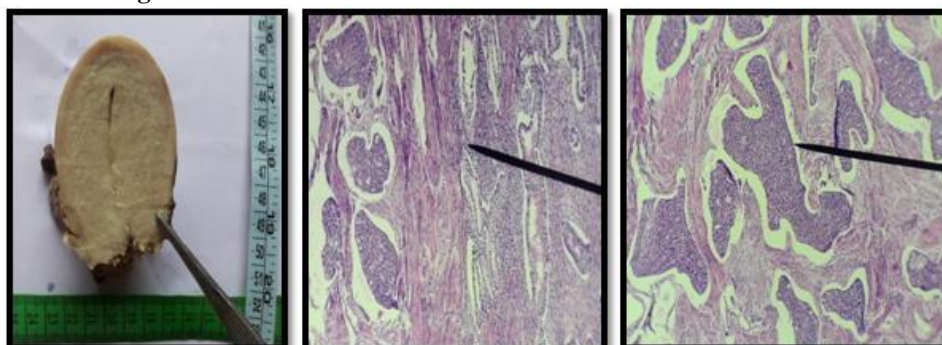
**Figure No. – 7 LEIOMYOSARCOMA**



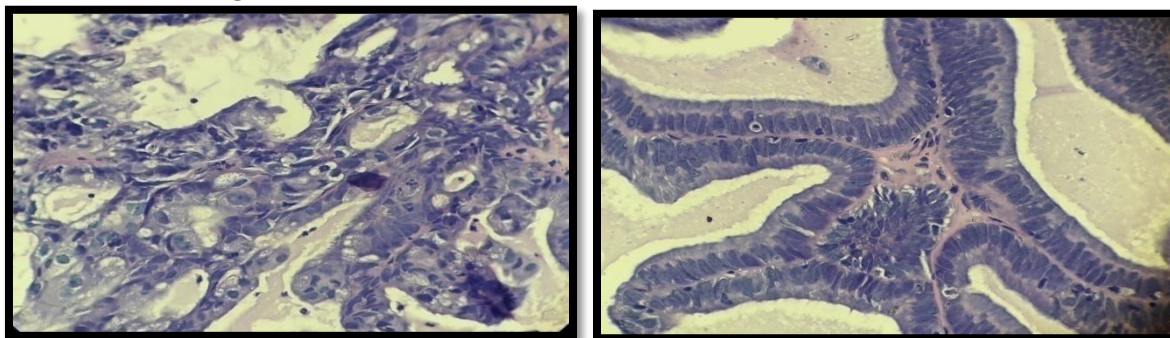
**Figure No. – 8 WELL DIFFERENTIATED ADENOCARCINOMA**



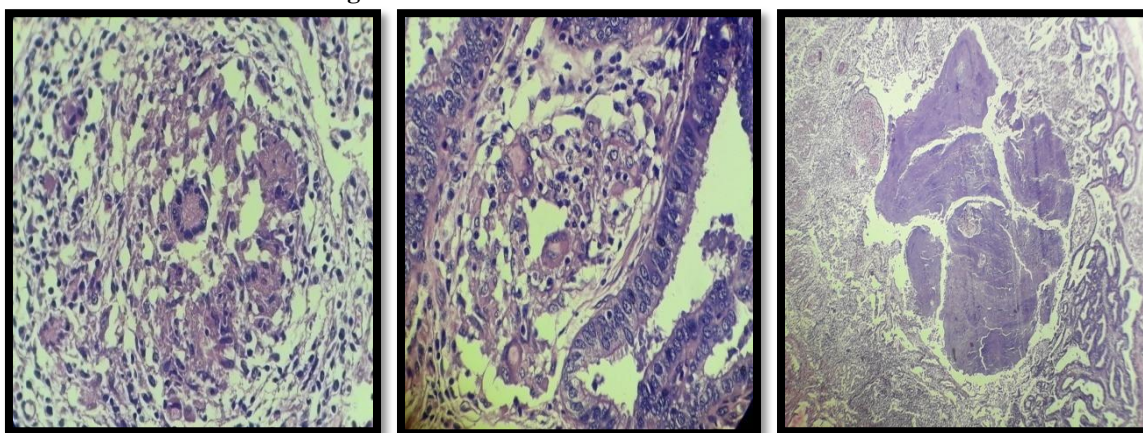
**Figure No. – 9 METASTATIC CARCINOMA IN MYOMETRIUM**



**Figure No. – 10 VILOGLANDULAR ADENOCARCINOMA CERVIX**



**Figure No. – 11 TUBERCULAR SALPINGITIS**



**IV. Discussion**

Hysterectomy is the most commonly performed surgical procedure throughout the world. It has diagnostic and therapeutic significance<sup>6, 11, 12</sup>. As the people in this area are illiterate, they are unaware of the disease or take jodi-butis and when disease become uncontrollable, the only option for them is Hysterectomy. In this study the commonest age group undergoing abdominal hysterectomy was 41-50 years. Studies done by Rather et al<sup>13</sup>, Jha et al<sup>14</sup>, Ranabhat et al<sup>15</sup>, Ramchandran et al<sup>16</sup> and Ajmera et al<sup>17</sup> had similar finding where as kameshwari et al<sup>18</sup> observed the average age at which surgeries were done was 28.5 years. The most common clinical indication for hysterectomy was Leiomyoma 41%, followed by AUB 29% Vaidya et al<sup>2</sup>, Yadav et al<sup>5</sup> and Jaganam Chandralekha<sup>7</sup> had similar findings where as K.Usha<sup>4</sup>, Talukdar<sup>10</sup>, Lahori<sup>8</sup> found Menorrhagia to be the most common clinical indication. In the study of Verma D et al<sup>6</sup>, most common indication was Uterovaginal prolapse 37.5%. In our study Leiomyoma was the most common histopathological diagnosis (56.4%), followed by Adenomyosis (13.4%). In Cervix, Chronic Cervicitis was found and in Ovary functional cyst followed by Benign Tumour was found. These findings were correlated with findings of Jha et al<sup>14</sup>, Ranabhat<sup>15</sup> et al and Rather et al<sup>13</sup>. Adenomyosis is the incidental finding and is diagnosed by Histopathological examination<sup>7,19</sup>. Many cases in this study revealed the presence of both Leiomyoma and Adenomyosis. Other studies had also found this association<sup>7,10,20,21,22</sup>. Fallopian tubes revealed unremarkable histology. Only 2 cases of Tuberculosis, 2 cases of Salpingitis and 2 cases of Tubal Pregnancy were found.

**Table No. – 1 Age group and Clinical Diagnosis reported by various authors**

Author	Age (years)	Cinical Diagnosis		
Rather at el,	41 – 50 (42.27%)	Uterine prolapse ( 37.1%)	Fibroid (24.9%)	Ovarian tumor (14.9%)
Jha et al,	41 – 50 (34.1 %)	Fibroid (36%)	AUB (28.64%)	Uterine prolapse (18%)
Ranabhat et al	41 – 50(43.12%)	Fibroid (41.37%)	Uterine prolapse (20.6%)	AUB (13%)
<b>Present study</b>	<b>41 – 50 (46%)</b>	<b>Fibroid (41%)</b>	<b>AUB (29%)</b>	<b>Uterine prolapse (18%)</b>

**Table No. – 2 Correlation between Clinical & Histopathological Diagnosis**

Clinical Diagnosis	Cases	Histopathology Report	No.
Fibroid	411	Leiomyoma	385
		Polyp	7
		Unremarkable	20
AUB	291	Adenomyosis	133
		Leiomyoma	40
		Adenomyoma	20

		Endometrial hyperplasia	40
		Leiomyosarcoma	12
		Unremarkable	47
Uterine prolapse	179	Atrophic endometrium	99
		Endo. hyperplasia	20
		Endo. polyp	7
		Unremarkable	53
Ovarian mass including cyst	85	Serous cystadenoma	12
		Mucinous cystadenoma	12
		Hemorrhagic cyst	27
		Teratoma	20
		Corpus luteal cyst	7
		Granulosa cell tumor	7
PID	20	Endometrial hyperplasia	20
Tubal pregnancy	12	Tubal pregnancy	12

**Table No. – 3** Pattern of lesions in Hysterectomy specimen reported by various authors

Author	Endometrium	Myometrium	Cervix	Ovary
Jha et al,	1. Atrophied 2. Hyperplasia	1. Leiomyoma 2. Adenomyosis	1. Chronic cervicitis 2. Cervical polyp	1. Functional cyst 2. Benign tumor
Ranabhat et al	1. Hyperplasia 2. Atrophied	1. Leiomyoma 2. Adenomyosis	1. Chronic cervicitis 2. CIN	1. Functional cyst 2. Benign tumor
Rather et al,	1. Atrophied 2. Hyperplasia	1. Leiomyoma 2. Adenomyosis	1. Chronic cervicitis 2. Chr cervicitis with squamous metaplasia	1. Functional cyst 2. Benign tumor
<b>Present study</b>	<b>1. Atrophied 2. Hyperplasia</b>	<b>1. Leiomyoma 2. Adenomyosis</b>	<b>1. Chronic cervicitis 2. Chr cervicitis with squamous metaplasia</b>	<b>1. Functional cyst 2. Benign tumor</b>

## V. Conclusion

It provides a correlation with the clinical and preoperative diagnosis and leads to appropriate management in the postoperative period.

Grossly identifiable benign tissue may contain malignancy. Hence it is mandatory that every Hysterectomy specimen, even if it grossly appears to be normal, should be subjected to detailed Histopathological examinations.

## Bibliography

- [1]. Karthikeyan T M, Veenaa N N, Ajeeth Kumar C R, Eliz Thomas. Clinicopathological study of Hysterectomy among rural patients in a tertiary care centre. IOSR journal of Dental and Medical Sciences, May 2015; 14(2): 25-7.
- [2]. Vaidya S, Vaidya S A. Patterns of lesions in hysterectomy specimens in a tertiary care hospital. J Nepal Med Assoc, Jan-March 2015; 53(197):18-23.
- [3]. Verma R. Histopathological study of Hysterectomy specimen in tertiary care centre of rural Bihar. International Journal of Recent Scientific Research, Feb 2016;7(2):9021-23.
- [4]. Usha K, Maheshwari J. Histopathological spectrum of lesions in Hysterectomy specimens at a tertiary care hospital- one year study. IOSR Journal of Dental and Medical Sciences, Oct 2017; 16(10): 34-8.
- [5]. Yadav D P, Yadav R, Bhati I. Abdominal Hysterectomy: analysis of clinicopathological correlation in Western Rajasthan, India. International journal of Reproduction, Contraception, Obstetrics and Gynaecology, 2017 March; 6(3):1012-1015.
- [6]. Verma D, Singh P, Kulshrestha R. Analysis of Histopathological examination of the Hysterectomy specimens in a North Indian Teaching Institute. Int J Res Med Sci, Nov 2016; 4(11): 4753-58.
- [7]. Chandralekha J, Sumanlatha G R, Kartheek BVS, Bhagyalakshmi A. Prospective study of Uterine Corpus Lesions over a period of one year in tertiary care center. Int J Res Med Sci, July 2016; 4(7):2588-87.



- [8]. Lahori M, Malhotra AS, Sakul, Khajuria A, Goswami KC; Clinicopathological spectrum of uterine Leiomyomas in a state of Northern India: a hospital based study. *Int J Repro Contracept Obstet Gynaecol*, July 2016; 5(7):2295-99.
- [9]. Koothan V, Vijay A, Maran G, Sreelakshmy. Prevalence and burden of adenomyosis in hysterectomy specimens for benign abnormal Uterine bleeding in a Tertiary Care Institute in Pondicherry, India. *Int J Reprod Contracept Obstet Gynecol*, April 2016; 5(4):1119-23.
- [10]. Talukdar B, Maleha S. Abnormal Uterine bleeding in perimenopausal women: correlation with sonographic findings and Histopathological examination of Hysterectomy specimens. *J Mid-Life Health*, November 2017; 7:73-77.
- [11]. Dhulia V, Gosai D, Jani H, Goswami H. Histopathological study of Uterine and Cervical lesion in Hysterectomy specimens. *B.JKines-NJBAS*, December 2016; 8(2):23-26.
- [12]. Abdullah SL. Hysterectomy: A Clinicopathologic correlation. *Bahrain Bulletin* 2006; 28:1-6.
- [13]. Rather GR, Gupta Y, Bardhwaj S. Pattern of lessons in Hysterectomy specimens. *JK Science* 2013; 15: 63-8.
- [14]. Jha R, Pant AD, Jha A, Adhikari RC, Sayami G. Histopathological analysis of Hysterectomy specimens. *J Nepal Med Assoc* 2006; 45: 283-90.
- [15]. Ranabhat SK, Shrestha R, Tiwari M, Sinha DP, Subedee LR. A retrospective Histopathological study of Hysterectomy with or without Salpingo-oophorectomy specimens. *JCMC*. 2010; 1(1): 26-9.
- [16]. Ramachandran T, Sinha P, Subramaniam. Correlation between Clinicopathological and Ultrasonographical findings in Hysterectomy. *J Clinic Diano Res*. 2011; 5(4): 737-40.
- [17]. Ajmera Sachin K, Mettler L, Jonat W. Operative spectrum of Hysterectomy in a German University Hospital. *J Obstet Gynecol India*, 2006; 56(1):59-63.
- [18]. Kameswari SV, Vinjamuri R. Medical Ethics: A case study of Hysterectomy in Andhra Pradesh. 1-37.
- [19]. Weiss G, Maseelall P, Schott LL, Brockwell SE, Schocken M, Johnston JM. Adenomyosis a variant, not a disease? Evidence from Hysterectomised menopausal women in the study of womens health across the nation (SWAN). *Fertil Steril*. 2009; 91(1): 201-6.
- [20]. Sarfaraz T, Tariq H. Histopathological findings in Menorrhagia: a study of 100 hysterectomy specimens. *Pak J Pathol*. 2005; 16(3): 83-5.
- [21]. Perveen S, Jayyab S. A Clinicopathological review of Elective Abdominal Hysterectomy. *J Surg Pak*. 2008; 13(1): 26-9.
- [22]. Bukhari U, Sadiq S. Analysis of the underlying pathological lesions in Hysterectomy specimens. *Pak J Pathol*. 2007; 18(4): 110-2.

Dr Deepika Dhruw. "Analysis of Histopathological Examination of Lesions in Hysterectomy Specimens in a Tertiary Care Hospital: A Five Year Study." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, vol. 18, no. 04, 2019, pp 31-39.