Journal of Advanced Medical and Dental Sciences Research

@Society of Scientific Research and Studies

Journal home page:www.jamdsr.com doi:10.21276/jamdsr Index Copernicus value [ICV] =82.06

(e) ISSN Online: 2321-9599; (p) ISSN Print: 2348-6805

Original Research

Histopathological analysis of uterus specimens

[1]Ravindra Kumar Srivas, [2]Gaurav Nayyar

[1]Associate Professor, Department of Pathology, Heritage Institute of Medical Sciences, Varanasi, Uttar Pradesh, India;
[2]Assistant Professor, Department of Surgery, Gouri Devi Institute of Medicine Sciences & Hospital, Durgapur, West Bengal, India

ABSTRACT:
Background:A crucial reproductive organ, the uterus is prone to numerous benign and malignant illnesses. The present study was conducted to assess histopathological analysis of uterus specimens. **Materials & Methods:**60 uterus specimens obtained in the Department of General Pathology were selected. The pathologists grossed the specimens, and the tissues were processed in the tissue processor for a whole night. In the microtome, blocks were formed and sections were cut to a thickness of 4 microns. The Histotechnicians stained these slices using haematoxylin and eosin, a standard stain. **Results:** The age group 20-30 years had 7, 31-40 years had 23, 41-50 years had 21 and >50 years had 9 cases. The difference was significant (P< 0.05).Histopathological findings were inflammatory endocervical polyp in 13, adenomyosis in 7, benign leiomyoma in 6, chronic myometritis in 5, chronic cervicitis in 3, endometrial hyperplasia in 16, atrophic endometrium in 6 and endometritis in 4 cases. The difference was significant (P< 0.05). **Conclusion:**Although there are many treatment options available now, such as conservative surgery and medication, hysterectomy is still the most recommended way to treat gynecological problems. The most frequent uterine lesions were endometrial hyperplasia and inflammatory endocervical polyp.
Keywords: Chronic myometritis, endometrium, myometrium

Corresponding Author: Gaurav Nayyar, Assistant Professor, Department of Surgery, Gouri Devi Institute of Medicine Sciences & Hospital, Durgapur, West Bengal, India

This article may be cited as: Srivas RK, Nayyar G. Histopathological analysis of uterus specimens. J Adv Med Dent Scie Res 2018;6(1):191-194.

INTRODUCTION

A crucial reproductive organ, the uterus is prone to numerous benign and malignant illnesses. Although there are many different therapeutic alternatives, such as conservative surgery and medicine, hysterectomy is still the most common gynecological procedure carried out globally. Because the treatment is not widely accepted in developing nations, the age and parity of the women as well as the therapeutic justifications for the procedure should be justified.[1] A woman's uterus can develop a number of benign and malignant disorders during the course of her lifetime. The endometrium and myometrium that make up the uterus are periodically influenced by several hormones. Numerous investigations have revealed a wide variety of abnormalities in the fallopian tubes and ovaries. Many non-neoplastic and neoplastic disorders, which are mostly observed in the reproductive system, can affect the cervix.[2]

These illnesses affect people of all ages and greatly raise the morbidity and mortality rates among women.[3] Perineal bleeding, vaginal discharge, abdominal pain, irregular menstruation, postmenopausal bleeding, abdominal mass, something coming out of the vagina, and other typical complaints are the most frequently reported issues. Although there are many therapeutic options for gynecological problems, including conservative surgery and medication, hysterectomy is still the most popular approach.[4] For the clinical diagnosis of endometrial pathology, light microscopy's assessment of the histological features of the endometrial biopsy material continues to be the gold standard. In fact, curettage or endometrial biopsy is used to make the initial diagnosis, which may have therapeutic benefits in and of itself. On the other hand, the endometrium may not be fully sampled during the biopsy or curettage, and the regions of highest histopathologicalidentification.[5]The present study was conducted to assess histopathological analysis of uterus specimens.

MATERIALS & METHODS

The present study was conducted on 60 uterus specimens obtained in the department of general pathology. All were informed regarding the study and their consent was obtained.

Data such as name, age, etc. was recorded. The pathologists grossed the specimens, and the tissues were processed in the tissue processor for a whole night. In the microtome, blocks were formed and sections were cut to a thickness of 4 microns. The Histotechnicians stained these slices using hematoxylin and eosin, a standard stain. Pathologists then carefully scrutinized each slide.Results thus obtained was subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Age group (Years)	Number	P value
20-30	7	0.01
31-40	23	
41-50	21	
>50	9	

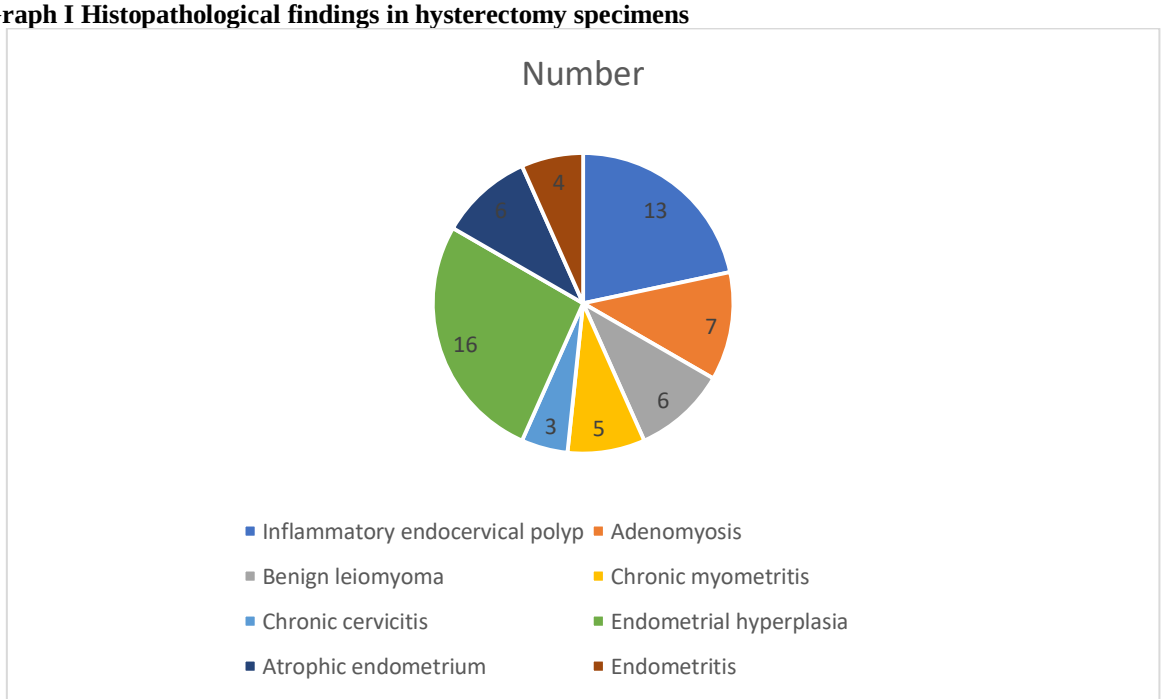
Table I shows that the age group 20-30 years had 7, 31-40 years had 23, 41-50 years had 21 and >50 years had 9 cases. The difference was significant (P< 0.05).

Table II Histopathological findings in hysterectomy specimens

Histopathological findings	Number	P value
Inflammatory endocervical polyp	13	0.01
Adenomyosis	7	
Benign leiomyoma	6	
Chronic myometritis	5	
Chronic cervicitis	3	
Endometrial hyperplasia	16	
Atrophic endometrium	6	
Endometritis	4	

Table II, graph I show that histopathological findings were inflammatory endocervical polypin 13, adenomyosis in 7, benign leiomyoma in 6, chronic myometritis in 5, chronic cervicitis in 3, endometrial hyperplasia in 16, atrophic endometrium in 6 and endometritis in 4 cases.The difference was significant (P< 0.05).

Graph I Histopathological findings in hysterectomy specimens



DISCUSSION

The uterine corpus, which is made up of the endometrium and myometrium, and the cervix are parts of the female genital tract. The uterus is a crucial reproductive organ that can develop a variety of benign and malignant diseases.[6] The endometrial

mucosa of the uterine corpus is periodically removed due to hormonal influences. The majority of patient appointments to gynecologists are related to lesions of the uterine corpus and cervix.[7] Although there are many treatment options available now, such as conservative surgery and medication, hysterectomy is still the most recommended way to treat gynecological problems. Because the uterus can develop both neoplastic and nonneoplastic problems over a woman's lifetime, hysterectomy is the most common gynecological treatment performed on females globally. It ought to be carried out when the riskof preserving the uterus is greater than it's removal or when the disabling symptoms for which there is no successful medical treatment.[8]The International Society of Gynecological Pathologists and the World Health Organization (WHO) have developed a classification system that distinguishes four distinct kinds with differing malignant potential.8 Simple and complicated hyperplasias are distinguished by the presence or absence of architectural anomalies such glandular complexity and crowding. Most notably, cytologic (i.e., nuclear) atypia is an additional marker that further classifies hyperplasias as atypical.[9] It is evident that only atypical endometrial hyperplasias are linked to the eventual development of adenocarcinoma. Patients with simple atypical hyperplasia have an approximate 8% advancement rate to carcinoma if treatment is not received; in contrast, women with complicated atypical hyperplasia have a progression rate of over 30% in one research and as high as 52% in another.[10]The present study was conducted to assess histopathological analysis of uterus specimens.

We found that the age group 20-30 years had 7, 31-40 years had 23, 41-50 years had 21, and >50 years had 9 cases. Talukder et al[11] found that the common histopathological findings werechronic cervicitis (87.80%), leiomyoma (17.07%), uterine prolapse (16.72%), adenomyosis (3.96), non-specific endometritis (3.35%), squamous cell carcinoma of the cervix (2.44%), endometrial polyp (2.44%), serous cystadenoma of ovary (2.44%) and endometrial hyperplasia (1.83%). Some of the specimens show more than one lesion in the body of the uterus, of which the coexistence of adenomyosis and leiomyoma was the most common. Neoplastic lesions in the cervix were 4.27%, in the body 16.92%, and in the ovaries 5.06%. Malignant neoplasms were found in the cervix 71.43%, in the uterine corpus 3.03%, and in the ovaries 25%. Ovaries of both sides were removed in 48.17% of total cases. Their median age was 45 years, the lowest age 23 years and the maximum age was 82. The rate of removal of both ovaries was found to be increasing with the increase of age. Only one case was found to be subtotal hysterectomy and others were total hysterectomy. The present study revealed that the most common histopathological cause of hysterectomy is chronic cervicitis. Most common neoplastic cause of hysterectomy is leiomyoma. The rationalities and the possible after effect of hysterectomy in sexual functions and other physiological impairment should be followed up.

We found that histopathological findings were inflammatory endocervical polyp in 13, adenomyosis in 7, benign leiomyoma in 6, chronic myometritis in 5, chronic cervicitis in 3, endometrial hyperplasia in 16, atrophic endometrium in 6 and endometritis in 4 cases. Baral et al[12] found that a total of 300 specimens were analyzed. In the group of patients less than 40 years of age, 73 (50%) were normal, 34 (23%) had abnormal physiologic changes and 13 (9%) had pregnancy related complications and benign changes. In the age group between 40 – 55 years, abnormal physiological changes, benign conditions and normal physiological changes were 45 (32%), 41 (29%) and 37 (26%) respectively. In the age group > 55 years, there were 3 (21%) malignant and 3 (21%) benign conditions. There were 5 (36%) unsatisfactory samples in this age group. Ramachandran et al[12] compared the histological diagnosis with the clinical diagnosis and ultrasonography results. A total of 234 hysterectomy specimens were received. The patients ranged in age from 31 to 40 at their peak. Among multiparous people, the disease was shown to be highly prevalent. Specifically, patients in the perimenopausal and postmenopausal age groups had transvaginal and pelvic ultrasonography as part of our study. 100% of malignancies, 95% of fibroids, and 80% of adenomyosis were found by ultrasound. Fibroids were the most frequent reason for transabdominal hysterectomy (30.7% of patients). Leiomyoma was the most often found pathology, followed by adenomyosis.

Ghaemmaghami Fet al[13] found that 86.6% of the patients had the microscopic invasion of the myometrium detected by gross examination, which had a sensitivity of 88.9%, specificity of 85.7%, and negative and positive predictive values of 72.7 and 94.7%, respectively. The final histological myometrial invasion was accurately reported by the frozen section in 90% of cases, with sensitivity of 88.9%, specificity of 90%, and positive and negative predictive values of 80 and 94.7%, respectively.

CONCLUSION

Authors found that although there are many treatment options available now, such as conservative surgery and medication, hysterectomy is still the most recommended way to treat gynecological problems. The most frequent uterine lesions were endometrial hyperplasia and inflammatory endocervical polyp.

REFERENCES

1. Sarfraz T, Tariq H. Histopathological findings in menorrhagia: a study of 100 hysterectomy specimens. Pak J Pathol. 2005;16(3):83-5.
2. Dicker RC, Seally MJ, Greenspan JR. Hysterectomy among women of reproductive age trends in United States. JAMA. 1990;248:328-35.

3. Ajmera SK, Mettler L, Jonat W. Operative spectrum of hysterectomy in a German University hospital, a retrospective analysis. J ObstetGynaecol India. 2006;56(1):59-63.
4. Archana B, Michelle F. Evaluation and histopathological correlation of abnormal uterine bleeding in perimenopausal women. Bombay Hospital J. 2010;52(1):69-72.
5. Sobande AA, Eskander M, Archibong EI, Damole IO. Elective hysterectomy: A clinicopathological review from Abha catchment area of Saudi Arabia. WAJM. 2005;24(1):31-5.
6. Watts WF, Kimbrough RA. Hysterectomy Analysis of 1000 consecutive operations. Obstet Gynecol. 1956;7(5):483-93.
7. Shakira P, Subhana T. A clinicopathological review of elective abdominal hysterectomy. J Surg Pakistan. 2008;13(1):26-9.
8. Qamar-ur-Nisa. Hysterectomies, an audit at a tertiary care hospital. Professional Med J. 2011;18(1):45-50.
9. Kjerulff KH, Erickson BA, Langenberg PW. Chronic gynecological conditions reported by US women: findings from the National Health Interview Survey, 1984 to 1992. Am J Public Health. 1996;86(2):195-9.
10. Baral R, Pudasaini S. Histopathological pattern of endometrial samples in abnormal uterine bleeding. Journal of Pathology of Nepal. 2011;1(1):13-6.
11. S I Talukder, M A Haque, M H Huq, M O Alam, A Roushan, Z Noor, K Nahar. Histopathological analysis of hysterectomy specimens. Mymensingh Med J2007 Jan;16(1):81-4.
12. Ramachandran T, Sinha P, Subramanium. Correlation between clinicopathological and ultrasonographical findings in hysterectomy. J Clinic Diagno Res. 2011;5(4):737-40.
13. Ghaemmaghami F, Aminimoghaddam S, Modares-Gilani M, Mousavi A, Khazaeipour Z, Fereidoni F. Assessment of gross examination and frozen section of uterine specimen in endometrial cancer patients. Archives of gynecology and obstetrics. 2010 Dec;282:685-9.