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Research Article

**PATHOLOGICAL AND CLINICAL FACTORS LEADING TO
HYSTERECTOMIES**¹ Dr. Nida Fatima, ² Dr. Israr Khan, ³ Dr. Hafsa Liaqat

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Abstract:

Objective: To evaluate the pattern and frequency of premalignant, malignant and benign lesions in hysterectomized uteri and execute clinic-pathological investigation. **SETTING:** collection of various hysterectomy samples from Nishtar Hospital Multan was carried out. These specimens were studied in the histopathology departments of these medical universities. Duration of the study was from January 2016 to December 2017.

Methods: 100 cases were selected who were undergoing hysterectomy. They were selected randomly for the detailed study. Afterwards, clinic-pathological examination was carried out. Most of the females undergoing hysterectomy were aged from 25-75 years. Two separate forms were prepared to note down the clinical details and record histopathological results. Preservation of the samples was executed in 10 percent formalin. They were comprehensively examined accordingly. Process of Representative blocks for paraffin embedding was performed.

Results: The most frequent complaint was abnormal menstrual flow. 43.06 ± 7.34 years was mean age of the patients. From the randomized study of one hundred cases, the most common findings were related to endometrial diseases (67 percent of the patients). Adenomyosis was found in 47 percent of the cases whereas leiomyoma was noted in 32 percent of the cases. Invasive cervical carcinoma was in 03 percent and cervical intraepithelial neoplastic changes were found as 04 percent of the cases.

Conclusion: To sum up the findings, benign uterine lesions were frequent which encompasses adenomyosis, endometrial hyperplasia and leiomyoma. These are equally seen in females in Multan whose ages are above or below of 40 years. However, with two exceptions of invasive cervical carcinoma and endometrial carcinoma which were mostly noted in the women aged above 40 years.

Key Words: Cervical Carcinoma, Endometrial Hyperplasia, Hysterectomy, Endometrial carcinoma and Leiomyoma.

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INTRODUCTION:

Genital tract diseases are frequent amongst the women. They may range from neo-plastic lesions to inflammatory problems. Pre- and postmenopausal women have dysfunctional uterine bleeding as a common issue. After caesarean operative procedure, Hysterectomy stands at the second position of such surgeries conducted in the very age group [1]. It is guessed that 25-30 percent American women underwent hysterectomy by 60 years of age. About 600,000 hysterectomies are being executed in USA annually. Cervical carcinoma, endometrial hyperplasia, leiomyoma, endometrial carcinoma, and adenomyosis are those frequent maladies which cause dysfunctional uterine bleeding amongst the women affected by female genital tract diseases [2]. They may result into chronic loss of blood thus triggering generalized weakness, anaemia, and mental stress. These diseases may be harbinger of risks associated with potential uterine cancer and infertility. Keeping in view these threats in mind, earlier diagnosis and treatment is significant [3].

Early diagnosis of a female who is being affected by irregular or cyclical heavy vaginal bleeding can prevent her from hysterectomy and hence can be a vital factor in maintaining her fertility. The study at hand is a randomized study undertaken to evaluate the pattern and frequency of premalignant, malignant and benign lesions in hystrectomized uteri and execute clinic-pathological investigation.

MATERIAL AND METHODS:

From January 2016 to December 2017, Paraffin blocks from hystrectomized uteri of one hundred patients were collected in the pathological departments of Nishtar Hospital Multan. Two separate forms were prepared to note down the clinical details and record histopathological results. Pre-menopausal and post-menopausal females offered specimens of Hysterectomy with the complaints of heavy irregular vaginal bleeding. They were categorised into two groups i.e. Group "A" from 25 years to 40 years and Group "B" from 41 years to 75 years. Hysterectomies which were executed due to pregnancy complications i.e. postpartum haemorrhage, antepartum haemorrhage and rupture of the uterus were dropped from the study. Every included hysterectomy was carried out after

ultrasound, CT scan or pap smear results or due to heavy irregular vaginal bleeding. Irrespective of their ages, parities and social classes, patients were selected from Multan. Interviews of all the participants were performed. Common asked questions during interviews were about contraceptive methods and menstrual and reproductive histories. Proforma I was utilised to record final findings and clinical histories. Preservation of samples was carried out in 10 percent formalin and process for paraffin embedding was performed accordingly.

PROCEDURE:

Hysterectomy specimens were undergone through gross examination in order to identification of any visible malfunction. It was recorded on proforma 2. Representative blocks were obtained from cervix, endometrium, myometrium, fibroid, polyp and growth present. Dehydration of blocks was carried out in changing alcohol concentrations. They were further embedded in blocks of paraffin wax by utilising plastic moulds or L-shaped moulds. Afterwards, they were solidified and became hard frozen in deep freezer [3]. BY using a rotatory microtome, these paraffin blocks were sliced into 2 to 5 micron thick sections. These slices were stained with eosin and haematoxylin. Recordings of histopathological results were jotted down in accordance with proforma 2. Gradation of endometrial hyperplasia was recorded [4].

RESULTS:

100 participants were part of our study. Their ages ranged from 25-75 years. 43.06 ± 7.34 years was mean age of the patients. 46 percent cases were detailed to Group "A" whereas 54 percent were assigned to Group "B". Most frequent diseases were endometrial diseases. They were followed by adenomyosis, leiomyomata uteri, cervical intraepithelial neoplastic changes (CIN), and invasive cervical carcinoma (as in Table I). As per histopathological results, endometrial hyperplasia was found to be the most frequent disease amongst endometrial diseases (Table II). Association of patient age in relation to endometrial hyperplasia, CIN, leiomyomata uteri and adenomyosis was not found (Table III). As far as endometrial carcinoma and invasive cervical carcinoma is concerned, an obvious relationship was observed between age and them.

TABLE I: FREQUENCIES OF VARIOUS UTERINE DISEASES IN HYSTERECTOMIES

DIAGNOSIS	NUMBER OF CASES	PERCENTAGE %
Leiomyoma	32	32
Endometrial Diseases	67	67
Adenomyosis	47	47
Cervical Intraepithelial Neoplasia	04	04
Invasive Cervical Carcinoma	03	03

TABLE II: DISTRIBUTION OF ENDOMETRIAL DISEASES IN HYSTERECTOMIES (n=67)

ENDOMETRIAL DISEASES	NUMBER OF CASES	PERCENTAGE %
Simple Hyperplasia	31	46.26
Complex Hyperplasia	25	37.31
Simple Atypical Hyperplasia	0	0
Complex Atypical Hyperplasia	04	6.0
Endometrial Carcinoma	07	10.49
Total	67	100

TABLE III: ANALYSIS OF HISTOPATHOLOGICAL DIAGNOSIS WITH VARIOUS AGE GROUPS

DIAGNOSIS	AGE GROUPS (YRS)		PERCENTAGE
	A	B	
Leiomyoma	15	17	32
Simple Hyperplasia	15	16	31
Complex Hyperplasia	12	13	25
Simple Atypical Hyperplasia	0	0	0
Complex Atypical Hyperplasia	02	02	04
Endometrial Diseases	01	06	07
Adenomyosis	21	26	47
Cervical Intraepithelial Neoplasia	02	02	04
Invasive Cervical Carcinoma	01	02	03

DISCUSSION:

In our country, Hysterectomy is frequently adopted operation to ensure better birth control and in case of irregular heavy uterine bleeding, uterine pathological lesions i.e. uterine malignancy, adenomyosis, endometrial hyperplasia and leiomyoma [5]. By keeping into considerations of the various cultural, religious and socio-economic patterns in Pakistani society, there are likely chances of prevailing varying patterns and frequencies of uterine and cervical lesions [6]. This study was aimed to evaluate the pattern and frequency of premalignant, malignant and benign lesions in hysterectomized uteri and execute clinic-pathological investigation. According to this study, most affected women were aged between 40 years to 70 years [7]. These findings (hysterectomy being performed after 40 years of age) correspond to the results of Adelusola and Ogunnivi [8].

In our study, Leiomyoma was almost equally existed in both Group "A" and Group "B" cases, thus suggesting the concept that no real relationship exists between age and leiomyoma [9]. This result is analogous to the findings of another study conducted by Muhammed et al., at Karachi. Changing degrees of endometrial hyperplasia was noted in majority of our cases (67). Among the two designed groups, age distribution of the cases showed no bond of endometrial hyperplasia with age [10]. It was in comparison to the findings of other studies that endometrial hyperplasia is frequently observed around menopause. Endometrial carcinoma diagnosis was seen in 07 percent of the cases in the current study in which one patient (14.28 percent) was less than 40 years in Group "A"; six patients (85.7 percent) were more than 40 years of age in Group "B" [11]. Hence, it showed a robust bond of endometrial carcinoma and age more than 40 years. 47 cases were related to Adenomyosis. Age distribution indicated no existence of bond between age and adenomyosis [12]. Adenomyosis can be found in both i.e. below 40 years of age and above 40 years of age. Cervical carcinoma (3 patients) was observed in 03 percent of cases (one case <40 years, 02 cases >40 years). These cases are not large enough yet they demonstrate bond between age and cervical carcinoma [13].

CONCLUSION:

By summing up the findings of our study, it was concluded that heavy irregular, vaginal bleeding were the most frequent indications for hysterectomy. 43.06 ±7.34 years was mean age of the patients. Moreover, benign conditions were reported as general factors in uterus. Cystic hyperplasia was the most noted diseases in adenomyosis, endometrium, and

leiomyoma. All the diseases are equally seen in females in Multan whose ages are above or below of 40 years. However, with two exceptions of invasive cervical carcinoma and endometrial carcinoma which were mostly noted in the women aged above 40 years.

SUGGESTIONS:

Since this study was meant to evaluate total 100 cases which seems a relatively small data. More number of potential cases should be assessed in keeping view the clinical and epidemiological data documentation such as socio-economic conditions, age at marriage, years of marriage, general age and parity etc to collect compact epidemiological data about adenomyosis, CIN, endometrial cancer, endometrial hyperplasia and uterine leiomyoma, encompassing cervical cancer to identify the risk of development. It is further recommended that factors which cause endometrial carcinoma to occur in women below the age of fifty must be thoroughly investigated.

REFERENCES:

1. Cun, H., et al., Longitudinal Outcome Study: What are the Factors That Impact Clinically Relevant Post-Operative Complications in Single-Port Laparoscopy. *Journal of Minimally Invasive Gynecology*, 2017. 24(7): p. S50.
2. Javellana, M., et al., Clinical and Pathologic Characteristics of Long-Term Survivors of Type 2 Endometrial Cancer. *Gynecologic Oncology*, 2017. 147(1): p. 231.
3. Kim, J.S., et al., Effects of obesity and hysterectomy approach on the surgical management of uterine malignancy. *Am J Clin Exp Obstet Gynecol*, 2015. 2(3): p. 96-101.
4. Desouki, M.M., et al., Intraoperative Pathologic Consultation on Hysterectomy Specimens for Endometrial Cancer: An Assessment of the Accuracy of Frozen Sections, "Gross-Only" Evaluations, and Obtaining Random Sections of a Grossly "Normal" Endometrium. *American journal of clinical pathology*, 2017. 148(4): p. 345-353.
5. Abdul-Karim, F.W. and B. Yang, Cytologic-Histologic Discrepancies in Pathology of the Uterine Cervix: Analysis of the Clinical and Pathologic Factors. *Advances in anatomic pathology*, 2017. 24(5): p. 304-309.
6. Subrata, P., et al., A retrospective clinicopathological study of hysterectomy cases in a tertiary care hospital in India—a review of 950 cases. *Bangladesh Journal of Medical Science*, 2018. 17(1): p. 88-92.

7. Joehlin-Price, A.S., et al., Endometrial cancer insulin-like growth factor 1 receptor (IGF1R) expression increases with body mass index and is associated with pathologic extent and prognosis. *Cancer Epidemiology and Prevention Biomarkers*, 2016. 25(3): p. 438-445.
8. Cramer, S.F. and D.S. Heller, A Review and Reconsideration of Nonneoplastic Myometrial Pathology. *International journal of surgical pathology*, 2017: p. 1066896917748194.
9. Benagiano, G., I. Brosens, and M. Habiba, Adenomyosis: a life-cycle approach. *Reproductive BioMedicine Online*, 2015. 30(3): p. 220-232.
10. Tuffnell, D.J. and E. Slemeck, Amniotic fluid embolism. *Obstetrics, Gynaecology and Reproductive Medicine*, 2017. 27(3): p. 86-90.
11. Timor-Tritsch, I.E., et al., Cesarean Scar Pregnancies. *Journal of Ultrasound in Medicine*, 2015. 34(4): p. 601-610.
12. Kaur, S., D. Pandey, and A. Shine, Hysterectomy for dysfunctional uterine bleeding in the era of uterine conservation. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 2017. 4(4): p. 1133-1136.
13. Khrucharoen, U., et al., Clinical predictors and risk factors for vaginal mesh extrusion. *World journal of urology*, 2018. 36(2): p. 299-304.