

To Evaluate the Risk Factors and Prevalence of Endometrial Carcinoma in Patients of Endometrial Hyperplasia

Prevalence of Endometrial Carcinoma in Patients of Endometrial Hyperplasia

Saira Parveen, Yasmeen Joyo, Shabana, Rozina Mujeeb, Resham Baloch and Samana Aleem

ABSTRACT

Objective: The rationale of our study is to find out the risk factors of developing in patients suffering from endometrial hyperplasia so that patients may be detected early and saved from developing cancer.

Study Design: cross sectional study

Place and Duration of Study: This study was conducted at the Department of Gyn & Obs at PMCH Nawabshah from January 2019 to December 2020 for a period of one-year.

Materials and Methods: Total patients included in this were 91. All the patients aged >40 to 65 years with any parity having complain of vaginal bleeding. Patients having uterine fibroids were excluded from the study. Detailed history regarding age, gravid parity and bleeding were taken apart from thorough clinical examination. Transvaginal sonography was performed using vaginal transducer of 6.5 MHz frequency. Endometrium hyperplasia was labeled as in the form of present or absent. If hyperplasia is found, endometrial tissue was taken to see its conversion into carcinoma through D&C.

Results: Total patients included in this study were 91. Of them 65 (71%) were nulliparous and 26 (29%) were multiparous. It ranged between 40 to 65 years with mean age of 48 years. 35 (38.5%) patients were of age 40 to 50 years. 30 (33%) patients were aged from 51 to 55 years. 26 (28.5%) patients age was from 56 to 65 years. Only 20 (22%) patients were diagnosed as endometrial carcinoma on histopathology. Of 20, only 5 (22.7%) patients had simple hyperplasia and 15 (68%) had complex hyperplasia.

Conclusion: It is concluded that null parity is the most significant risk factor in our study and prevalence of EC is decreased in our study.

Key Words: Endometrial Carcinoma, Null parity, Obesity, Hyperplasia

Citation of article: Parveen S, Joyo Y, Shabana, Mujeeb R, Baloch R, Aleem S. To Evaluate the Risk Factors and Prevalence of Endometrial Carcinoma in Patients of Endometrial Hyperplasia. Med Forum 2022;33(1):91-93.

INTRODUCTION

Endometrial Carcinoma (EC) is the commonly reported gynecological malignancy in developed countries having annual incidence of 20 cases per 100,000 women. The report of American cancer Society shows probability of EC of 1 in 37 women. Increasing age, obesity and nulliparity are the significant risk factor of this disease in developing countries. The mortality of this disease accounted for 2.1% with good prognosis unless diagnosed at late stage.

Department of Obstet and Gynae, Peoples University of Medical and Health Sciences For Women (PUMHSW), Nawabshah.

Correspondence: Dr. Saira Parveen, Assistant Professor of Obstet and Gynae, Peoples University of Medical and Health Sciences For Women (PUMHSW), Nawabshah.

Contact No: 0335-3159532

Email: sairamemon1976@gmail.com

Received: September, 2021

Accepted: November, 2021

Printed: January, 2022

A risk factor is called when something enhances that gets the chance of getting converted disease such as cancer. Multiple diseases have varied risk factors. Some risk factors can be changed and some can't be. There are certain factors which increase the risk of endometrial cancer in women.¹

The factors affecting the development of endometrial cancer includes obesity, estrogen taken after menopause, contraceptive pills, pregnancy, PCOS, ovarian tumors, age, diet, type 2 D.M, endometrial hyperplasia and radiotherapy. The factors like pregnancy, contraceptive pills/ IUD have lower risks.^{2,3} Endometrial hyperplasia is simply defined as the increased growth of endometrium. It is noninvasive proliferation of lining of uterus whose outcome is the series of glandular alterations. Endometrial Hyperplasia is classified into two types viz simple and complex based on the degree of structural complexity as seen by glandular crowding and with or without cytologic atypia.⁴ Simple hyperplasia rarely transforms into cancer. Complex type commonly is converted to endometrial carcinoma and is commonly treated with progesterone and hysterectomy. According to cytology, findings commonly are nuclear irregularity such as loss

of axial polarity, rounded stratified nuclei and prominent nuclei. Hyperplasia Atypia is type of hyperplasia associate with increased risk of carcinoma and is usually treated by Hysterectomy.^{5,6}

Endometrial hyperplasia occurs due to increased estrogen level by stimulating the growth of endometrial cells. Estrogen binds to nuclei of endometrial cells. This results in shedding of endometrial tissue because of effect of estrogen proliferating cells to progesterone. This occurs in two ways either by decreasing the number of estrogen receptors or increasing the conversion of estradiol to estrone.^{7,8}

Abnormal vaginal bleeding is the common presentation unrelated to normal menstruation like heavy menstrual bleeding.⁹ It is more than 80ml/period on three consecutive menstrual periods that is measured with help of soaked pad. Each soaked pad is about 10 m Of blood. Diagnosis is usually done on trans-vaginal ultrasound.¹⁰ It is considered to be hyperplasia if endometrial thickness is more than 5 mm.^{11,12}

MATERIALS AND METHODS

This is a cross sectional study done at PMCH Nawabshah from January 2019 to December 2020. Total patients included in this were 91. All the patients were admitted from OPD Gyn/Obs and emergency Department of PMC Hospital Nawabshah. All the patients aged >40 to 65 years with any parity having complain of vaginal bleeding. Patients having uterine fibroids were excluded from the study.

Detailed history regarding age, gravid parity and bleeding were taken apart from thorough clinical examination. Routine investigations were done. trans-vaginal ultrasound was also done. Transvaginal sonography was performed using vaginal transducer of 6.5 MHz frequency. Endometrium hyperplasia was labeled as in the form of present or absent. If hyperplasia is found, endometrial tissue was taken to see its conversion into carcinoma through D&C.

RESULTS

Total patients included in this study were 91. Of them 65 (71%) were nulliparous and 26 (29%) were multiparous (Chart No.1). Age difference was also seen in all patients. It ranged between 40 to 65 years with mean age of 48 years. 35 (38.5%) patients were of age 40 to 50 years. 30 (33%) patients were aged from 51 to 55 years. 26 (28.5%) patients age was from 56 to 65 years (Table No.1).

Table No.1: Age Difference

S. No.	Age of patients	No of patients	Percentage
1	40-50 Years	35	38.5%
2	51-55 years	30	33%
3	56-65	26	28.5%
Total	40-65	n= 91	100%

Of 91 patients, only 20 (22%) patients were diagnosed as endometrial carcinoma on histopathology. Of 20, only 5 (22.7%) patients had simple hyperplasia and 15 (68%) had complex hyperplasia (Chart No.2).

Table No.2: Risk Factors of Endometrial Carcinoma

S.No.	Risk factors	No of patients	Percentage
1	Nulliparous	65	71%
2	Obesity	7	7.6%
3	D. M	6	6.5%
4	Estrogen taken after menopause	7	7.6%

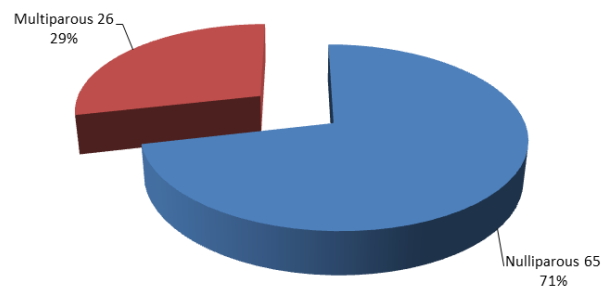


Figure No.1: Parity Prevalence

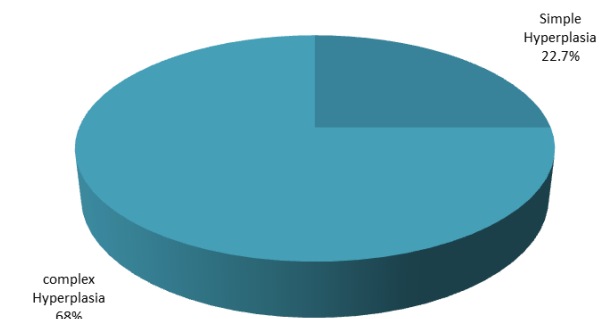


Figure No.2: Endometrial Carcinoma

DISCUSSION

Endometrial carcinoma (EC) is the common malignancy in females. Every year, more than 40 thousand new cases appear in United States of America.¹³ This figure is increased as compared to prevalence of ovarian and cervical carcinomas. Approximately, 1 in 50 females develop endometrial carcinoma.¹⁴

This carcinoma occurs at reproductive age and menopausal stage. In a study, the median age endometrial carcinoma is 61 years. The most patients are between 50 and 59 years. In another study, 10% of women had developed EC before 40 years and 20-30% patients were diagnosed before the menopause. Another study has reported endometrial hyperplasia patients aged between 40-59 had increased risk of developing EC. The risk was higher in patients aged above 60 years due to decreased immune system. In our study, the common age of incidence was 40-50 years.¹⁵

There is a close association of EC with parity. A total of 42 studies reported the association between parity for

parous versus nulliparous for the development of EC. In a study, nulliparous women had more prevalence of endometrial carcinoma as compared to multiparous women. In our study, 65 (71%) patients were nulliparous and 26 (29%) were multiparous.¹⁶

Several studies concluded that patients having history of diabetes Mellitus and Obesity are associated with increased risk of endometrial carcinoma. But in another study, diabetes mellitus did not show any significant association but obesity showed association with development of EC. In our study, risk factor most commonly caused EC was null parity then DM and obesity.¹⁷

CONCLUSION

It is concluded that null parity is the most significant risk factor in our study and prevalence of EC is decreased in our study.

Author's Contribution:

Concept & Design of Study:	Saira Parveen
Drafting:	Yasmeen Joyo, Shabana
Data Analysis:	Rozina Mujeeb, Resham Baloch, Samana Aleem
Revisiting Critically:	Saira Parveen, Yasmeen Joyo
Final Approval of version:	Saira Parveen

Conflict of Interest: The study has no conflict of interest to declare by any author.

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