

# Examine the Prevalence and Types of Endometrial Hyperplasia and its Management in Premenopausal Women Presenting With Abnormal Menstrual Bleeding

NAZIA SAJJAD<sup>1</sup>, SAMRA ISMAT<sup>2</sup>, AMNA FAREED<sup>3</sup>

<sup>1</sup>Associate Professor of Obstetrics & Gynaecology, Niazi Medical & Dental College Sargodha

<sup>2</sup>Assistant Professor of Obstetrics & Gynaecology, M. Islam Medical College Gujranwala

<sup>3</sup>Assistant Professor of Obstetrics & Gynaecology, Muhammad College of Medicine Peshawar

Correspondence: dr.naziasajjad@gmail.com

## ABSTRACT

**Aim:** To determine the prevalence of menstrual hyperplasia in premenopausal women with abnormal menstrual and uterine bleeding.

**Study Design:** Cross sectional/observational study.

**Place and Duration of Study:** Department of Obstetrics & Gynaecology, Niazi Medical & Dental College Sargodha from 1<sup>st</sup> October 2017 to 31<sup>st</sup> March 2018.

**Methods:** A total of 302 women with abnormal menstrual bleeding were enrolled. Patient's ages were ranging from 35 to 60 years. Patients detailed medical history including age, sex, socio-economic status, education were examine after taking informed consent from all the patients. Transvaginal ultrasonography was performed to examine the endometrial thickness. Endometrial sampling was done by pipelle-endocurette. All the histopathological findings were examined. Management associated to hyperplasia was recorded.

**Results:** Eighty five (28.15%) patients diagnosed to had endometrial hyperplasia. Most of the patients 44 (51.76%) were ages between 45 to 55 years. Parity was noted as nulliparous in 9 (10.59%) patients and multiparous in 74 (89.41%) patients. 56 (65.89%) patients found had endometrial thickness above 10mm. The most commonest type of endometrial hyperplasiawas simple hyperplasia without atypia in 49 (57.65%) patients.

**Conclusion:** The prevalence of endometrial hyperplasia was high and most of the patients were ages 45 to 55 years. Early and accurate diagnosing can helps to reduce the morbidity associated with endometrial hyperplasia.

**Keywords:** Endometrial Hyperplasia, Abnormal uterine bleeding, Menstrual abnormality, Endometrial thickness

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## INTRODUCTION

Hyperplasia is the increase in size of an organ or tissue due to increase in no. of its specialized cells. Endometrium is capable of marked hyperplasia as a response to stimulus of prolonged and unopposed oestrogen classification of endometrial hyperplasia<sup>1</sup>. Simple or cystic hyperplasia is a benign proliferation of endometrial glands that are irregular and dilated but do not display back to back crowding or cellular atypia. Complex adenomatous hyperplasia is a proliferation of endometrial glands with irregular outline architectural complexity and back to back crowding but no atypia. Atypical hyperplasia is a varying degrees of nuclear atypia and loss of polarity found in both simple and complex hyperplastic lesion. Incidence of hyperplasia in a study by Wentz<sup>2</sup> in curettage specimen was cystic hyperplasia 5.1%, adenomatous hyperplasia 2.6%, atypical hyperplasia 1.3%. Endometrial hyperplasia is a precursor of endometrial carcinoma, the most common malignancy of female reproductive tract. It accounts for 6% of new female cases and 3% of female cancer deaths<sup>2</sup>. Besides endometrial hyperplasia prominent risk factors for endometrial carcinoma are unopposed oestrogen therapy, obesity, diabetes early menarche and late menopause<sup>3</sup>. The 3 grades of endometrial hyperplasia are simple (cystic), adenomatous (complex) and atypical hyperplasia. Endometrial hyperplasia in most of the cases is idiopathic. It may be due to anovulation at extreme of age<sup>4</sup>.

The role of exogenous oestrogen in inducing endometrial hyperplasia in a well-known recent prospective study showed that 10% of women developed denomatous

hyperplasia every year. Tamoxifen used for breast cancer, due to its weak oestrogenic effect can induce endometrial hyperplasia. Niwa *et al*<sup>5</sup> conducted a study on mice to see the effects of tamoxifen on endometrium. The results showed increased incidence of pre-neoplastic lesions of the endometrium. Oestrogen secreting ovarian tumours may be the occasional cause of endometrial hyperplasia<sup>5,6</sup>.

Association with concomitant endometrial cancer, ovarian cancer, and progression of hyperplasia to cancer should be kept in mind while dealing with these patients. In atypical hyperplasia, co-existent carcinomas range from 25 to 50%.<sup>7</sup> The risk of progression to endometrial cancer ranges from 22.6 to 88.9%.<sup>8</sup> Malignant transformation occurs in 15%, 24% and 45% of mild moderate and sever atypical hyperplasia respectively.<sup>9</sup> The current study was conducted to determine the prevalence of endometrial hyperplasia in perimenopausal women whom presented with menstrual abnormality or irregular uterine bleeding to reduce the morbidity and mortality associated to endometrial hyperplasia and to provide the better treatment.

## MATERIALS AND METHODS

This cross-sectional study was conducted at Department of Obstetrics & Gynaecology, Niazi Medical & Dental College Sargodha from 1<sup>st</sup> October 2017 to 31<sup>st</sup> March 2018. In this study total 302 women with abnormal menstrual bleeding were enrolled. Patients ages were ranging from 35 to 60 years. Patients with cervical polyps, hypothyroidism, genital tract tumor and those who were not interested were

excluded from this study. Patients detailed medical history including age, sex, socio-economic status, education were examine after taking informed consent from all the patients. Routine examination such as blood group, blood glucose, complete blood picture, urine routine analysis was done in all the patients. Transvaginal ultrasonography was performed to examine the endometrial thickness. Endometrial sampling was done by pipelle-endocurette. All the histopathological findings were examined. Treatment provide to patients were also recorded. Data was analyzed by statistical software SPSS 20.

## RESULTS

There were 85 (28.15%) patients had endometrial hyperplasia. From 85 patients, 19(22.35%) patients had ages 35 to 44 years, 44(51.76%) were ages between 45 to 55 years and 22 (25.88%) patients with ages above 55 years. 50 (58.82%) patients had rural residency while 41.18% patients had urban residency. 34(40%) patients were literate while 60% were illiterate. Parity was noted as nulliparous in 9(10.59%) patients and multiparous in 74(89.41%) patients (Table 1).

Pattern of menstrual abnormality was noted as abnormal menstrual bleeding and irregular uterine bleeding in 52 (61.18%) and 33 (38.82%) patients respectively. 13(15.29%) patients had endometrial thickness 5 to 7mm, 16(18.82%) patients had endometrial thickness 8 to 10mm and 56(65.89%) patients found to had endometrial thickness above 10mm. The most common type of endometrial hyperplasia was simple hyperplasia without atypia in 49(57.65%) patients followed to with atypia, complex hyperplasia with atypia and without atypia (Tables 2-3).

Medical treatment provided to 57(67.06%) patients, medical followed by surgical provided to 17(20%) patients and only surgical treatment was provided to 11(12.94%) patients (Table 4).

Table 1: Demographical details of endometrial hyperplasia patients

Variable	No.	%
<b>Age (years)</b>		
35 – 44	19	22.35
45 – 55	44	51.75
> 55	22	28.15
<b>Residency</b>		
Urban	35	41.18
Rural	50	58.82
<b>Education</b>		
Literate	34	40.0
Illiterate	51	60.0
<b>Parity of endometrial hyperplasia</b>		
Nulliparous	9	10.59
Multiparous	74	89.41
<b>Pattern</b>		
Irregular/heavy MB	52	61.18
Abnormal uterine bleeding	33	38.82

Table 2: Finding of transvaginal ultrasonography (endometrial thickness)

Endometrial thickness (mm)	No.	%
5 – 7	13	15.29
8 – 10	16	18.82
> 10	56	65.89

Table 3: Types of endometrial hyperplasia

Variable	No.	%
<b>Simple hyperplasia</b>		
With atypia	10	11.76
without atypia	49	57.65
<b>Complex</b>		
With atypia	8	9.41
without atypia	18	21.17

Table 4: Treatment provided to patients

Treatment	No.	%
Medical	57	67.06
Medical + Surgical	17	20.0
Surgical	11	12.94

## DISCUSSION

Endometrial hyperplasia is common in perimenopausal women causing symptoms of irregular or prolonged bleeding due to anovulatory cycles in majority of cases. Heavy bleeding is secondary to sustained level of oestrogens. The overgrowth not only affects glands and stroma but there is also abnormal vascularisation. Bleeding is prolong and excessive because of massive tissue available for bleeding and random break down of tissue resulting in exposure of vascular channels. There is no vasoconstrictive rhythmicity, no tight coiling of spiral vessels and no collapse to induce stasis. The healing effect of oestrogen is brief and vicious cycle of bleeding reoccurs<sup>10</sup>.

In our study we found that the prevalence of endometrial hyperplasia in perimenopausal women with heavy menstrual and uterine bleeding was 28.15% out of 302 women. These results was similar to some other studies in which frequency of endometrial hyperplasia was rated 20 to 35%.<sup>11-13</sup> In this study most of the patients were ages between 45 to 55 years 51.75%. Some previous studies regarding endometrial hyperplasia and carcinoma demonstrated that patients with ages above 40 years had high prevalence of endometrial hyperplasia<sup>14-16</sup>.

In present study we found that majority of premenopausal women had heavy menstrual bleeding and rated 61.18%, A study conducted regarding abnormal uterine or heavy menstrual bleeding resulted that most of the patients with heavy menstrual bleeding had endometrial hyperplasia.<sup>17</sup> In our study we observed that mostly patients found to had simple hyperplasia without atypia. A study conducted by Ameera et al<sup>18</sup> reported that the incidence of simple, complex and atypical hyperplasia as 60, 20 and 13%. These results were similar to our study.

In our study, the frequency of endometrial hyperplasia was high in patients with endometrial thickness was above 10mm. 59.5% of patients with endometrial hyperplasia had heavy menstrual bleeding. These results shows similarity to some other studies in which heavy menstrual bleeding in premenopausal women accounted high frequency of endometrial hyperplasia<sup>19,20</sup>. Many of studies on transvaginal ultrasonography demonstrated that endometrial thickness measurement correlated well with results obtained by histopathology<sup>21</sup>. Fayyaz et al<sup>22</sup> reported diagnostic accuracy of Transvaginal ultrasound was 75.6%. Another study regarding endometrial hyperplasia in pre and postmenopausal women reported

diagnostic accuracy of Transvaginal ultrasonography was 88.8%<sup>23</sup>. Our results regarding diagnostic accuracy shows similarity to these studies.

Treatment provided to effected patients was medical, medical followed to surgical and direct surgical. Medical treatment was provided to most of the patients and it shows better results. Ameerah et al<sup>18</sup> shows similar results to our study.

## CONCLUSION

Endometrial hyperplasia is the most common malignant gynecological disorder found in women with elderly age. It is concluded from this study that prevalence of endometrial hyperplasia was high and most of the patients were ages 45 to 55 years. Early and accurate diagnosing can help to reduce the morbidity associated with endometrial hyperplasia.

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