

## Age specific prevalence of endometrial hyperplasia in a tertiary care centre from south India

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### Abstract

**Introduction:** Endometrial hyperplasia is a premalignant lesion for endometrial carcinoma accounting for 6% of new female cases and 3% of female cancer deaths.<sup>(1,2)</sup> Endometrial cancer is the third most common malignancy of the female genital tract.

**Objectives:** This study was carried out to find out the prevalence of each type of endometrial hyperplasia (simple, complex, atypical) in different age groups.

**Materials and Methods:** Age specific prevalence of different types of hyperplasia was noted in five groups viz, 21-30 years, 31-40 years, 41-50 years, 51-60 years and >60 years.

**Results:** Simple hyperplasia was common in 5th decade (24%). Complex hyperplasia was prevalent in 4th decade (5%). Increased prevalence of atypical hyperplasia was seen in 5th (11%) followed by 4th decade (10%).

**Conclusion:** Atypical hyperplasia which carries increased risk for malignancy is common in 5th decade. Age specific prevalence patterns will help us know magnitude of the problem so that strategies could be made for early prevention and intervention to prevent morbidity and mortality due to dysfunctional uterine bleeding.

**Keywords:** Abnormal uterine bleeding, Age specific, Distribution, Endometrial hyperplasia, Histopathology

### Introduction

Endometrial hyperplasia is a premalignant lesion for endometrial carcinoma accounting for 6% of new female cases and 3% of female cancer deaths.<sup>(1,2)</sup> Endometrial cancer is the third most common malignancy of the female genital tract with age standardized incidence of rate of 2.9 per 100,000 women.<sup>(3,4)</sup> Three main types of endometrial hyperplasia as per WHO diagnostic criteria modified by Kurman<sup>(2,5)</sup> are: simple hyperplasia with low risk of progression to endometrial carcinoma (0.4%); complex hyperplasia with intermediate risk of progression (0 to 26.7%); and atypical hyperplasia, with greatest risk of endometrial carcinoma progression (22.6% to 88.9%).<sup>(2,3,5)</sup>

### Objectives

This study was carried out to find out the prevalence of each type of endometrial hyperplasia (simple, complex, atypical) in different age groups.

### Materials and Methods

The hematoxylin and eosin stained slides of one hundred patients between 2006 to 2012 were studied. The patients who presented with abnormal vaginal bleeding and were diagnosed as endometrial hyperplasia using WHO diagnostic criteria modified by Kurman<sup>(2,5)</sup> in 1985 and revised in 1994, were included

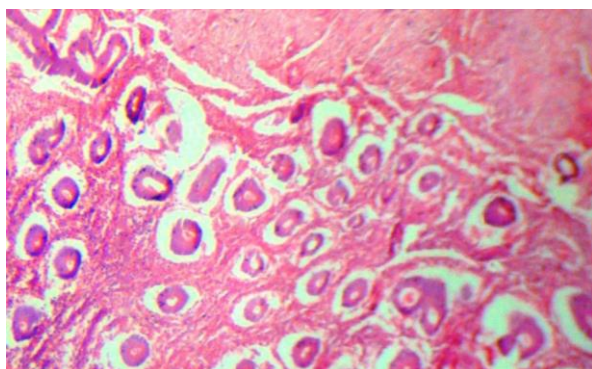
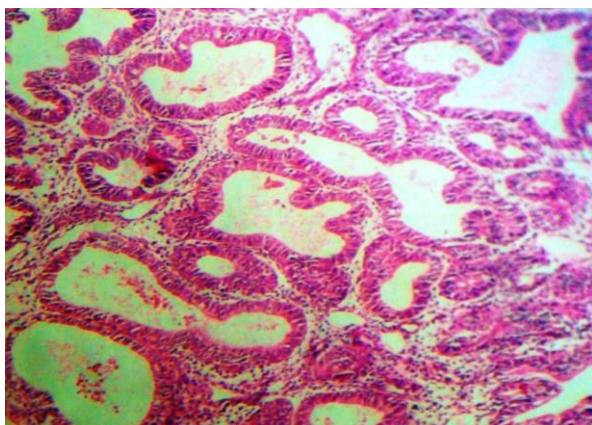
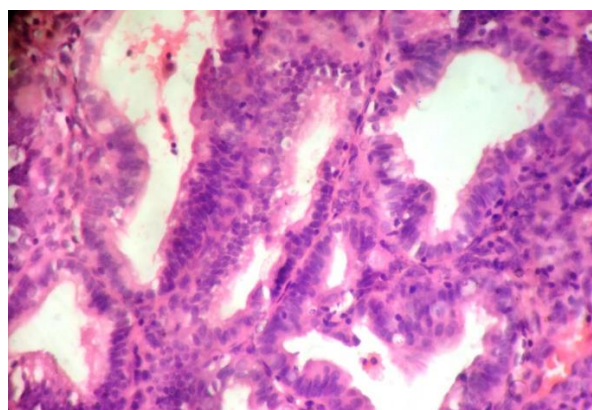
in this study. The patients were not on hormonal therapy. The formalin fixed endometrial samples were routinely processed and 4-5 $\mu$  thick sections were cut from paraffin blocks. The sections were stained by routine haematoxylin and eosin stains. Age specific prevalence of different types of hyperplasia was noted in five groups viz, 21-30 years, 31-40 years, 41-50 years, 51-60 years and >60 years.

### Results

The age of patients ranged from 20- 83 years. Out of 100 cases of endometrial hyperplasia, 21-30 years age group showed only total of 6% of cases of simple (Fig. 1) and complex hyperplasia (Fig. 2). No atypical hyperplasia (Fig. 3) was seen in this age group. 31- 40 years age group showed 20%, 5% and 10% of simple, complex and atypical hyperplasia respectively. 41 -50 years age group showed 24%, 2% and 11% of simple, complex and atypical hyperplasia respectively. 51-60 and >60 years age group showed increased number of atypical hyperplasia (7% and 9% respectively) when compared to simple and complex hyperplasia in same age group. Simple hyperplasia was common in 5th decade (24%). Complex hyperplasia was prevalent in 4th decade (5%). Increased prevalence of atypical hyperplasia was seen in 5th (11%) followed by 4th decade (10%). (Table 1)

**Table 1: Age specific distribution of hyperplasia**

	21-30 yrs	31-40 yrs	41-50 yrs	51-60 yrs	>60 yrs	Total
Simple hyperplasia	4	20	24	2	1	51
Complex hyperplasia	2	5	2	2	1	12
Atypical hyperplasia	0	10	11	7	9	37
Total	6	35	37	11	11	100

**Fig. 1: Microphotograph of simple hyperplasia. (H&E, 10X)****Fig. 2: Microphotograph of complex hyperplasia. (H&E, 40X)****Fig. 3: Microphotograph of atypical hyperplasia. (H&E, 40X)**

## Discussion

Recamier in 1850 first recognized the condition of endometrial hyperplasia. Endometrial hyperplasia not only predisposes to endometrial carcinoma, but also causes mental and economic burden on the patients with its distressing clinical symptoms, menorrhagia and menometrorrhagia, emergency and outpatient consultations.<sup>(5)</sup> diagnostic evaluations, medical and surgical treatment.<sup>(5,8)</sup> Muzaffar et al<sup>(9,10)</sup> found that endometrial hyperplasia was one of the leading pathology in women suffering from abnormal uterine bleeding.<sup>(9)</sup>

Very little is known about the prevalence of endometrial hyperplasia as there are no routine screening procedures available for the detection of endometrial cancer or its antecedent lesions. Very few studies have performed routine endometrial biopsies on asymptomatic women due to the invasive nature of endometrial sampling.<sup>(5,11,12)</sup> Simple hyperplasia is characterized by minimal endometrial glandular crowding, complex hyperplasia by greater endometrial glandular crowding and atypical hyperplasia by complex glandular crowding and/or cytologic atypia.<sup>(2,5,13)</sup>

Our study showed high prevalence of atypical hyperplasia in 5<sup>th</sup> followed by 4<sup>th</sup> decade of life which is in comparison with studies done by Kayasta et al.<sup>(3)</sup> According to Reed et al<sup>(5)</sup> the incidences of simple and complex hyperplasia were highest in women ages 50–54 years. The incidence of atypical hyperplasia was highest in women ages 60–64 years. Overall, the incidence of any type of hyperplasia was highest in women ages 50–54 and was rare in women under age 30. This difference could be attributable to 5 year interval in division of age group in study by Reed et al.<sup>(5)</sup>

Several investigators have found beneficial effects from treating hyperplasia and carcinoma with progesterone. According to Kistner, patients with atypical hyperplasia and carcinoma in situ when treated with progesterone, lesions were reversible and none advanced.<sup>(9)</sup>

## Conclusion

The severity of hyperplasia increases the risk of invasive carcinoma. Atypical hyperplasia which carries increased risk for malignancy is common in 5<sup>th</sup> decade. Age specific prevalence patterns will help us know

magnitude of the problem so that strategies could be made for early prevention and intervention to prevent morbidity and mortality due to dysfunctional uterine bleeding. Timely treatment can help us provide an environment for the lesion to regress and avoid radical surgeries.

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