www.jmscr.igmpublication.org
Impact Factor (SJIF): 6.379
Index Copernicus Value: 71.58
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v6i6.117

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Histopathological Evaluation of Hyperplastic Endometrial Lesion based on New WHO classification

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Abstract
Introduction: *Endometrial hyperplasia is defined as an increase in the proliferation of endometrial glands relative to stroma, resulting in increased gland to stroma ratio. It is most commonly occurred due to unopposed oestrogen action. In recent past the most widely used system divided endometrial hyperplasia into four categories: simple hyperplasia without atypia; complex hyperplasia without atypia; simple atypical hyperplasia; complex atypical hyperplasia. Recently WHO collapse the four categories into two as non atypical hyperplasia and atypical hyperplasia (also referred as endometrial intraepithelial neoplasia).*
Aims: *1) To study comparison between the old and new WHO classification of endometrial hyperplasia.*
2) To find out the age wise incidence of these lesions.
3) To estimate the incidence of benign and malignant lesions.
Methods and Material: *Retrospective study of cases of endometrial lesions diagnosed as endometrial hyperplasia in M.Y. hospital Indore during 10 year duration. The cases with endometrial hyperplasia were reclassified according to new WHO classification.*
Results: *Among 600 cases of endometrial hyperplasia 94% cases are of non atypical hyperplasia while 6% cases are of atypical hyperplasia. Majority of the cases are between 41 to 60 year of age. 35% atypical hyperplasia cases they turned out to be malignant while only 0.5% cases without hyperplasia are converted to malignancy.*
Conclusions: *Recently WHO classified endometrial hyperplasia as non atypical and atypical hyperplasia (endometrial intraepithelial neoplasia). It is better than old one as it represents an important simplification for clinical practice, particularly with regard to choice of treatment. Non atypical hyperplasia are treated conservatively while for atypical hyperplasia hysterectomies are done.*
Keywords: *Endometrial Hyperplasia, Endometrial Carcinoma, New WHO Classification.*

Introduction

Endometrial hyperplasia leads to increase in gland-to-stroma ratio due to excessive and continuous stimulation of the endometrium by oestrogen.[1][3] EH clinically presents with abnormal uterine bleeding[2]. There incidences are 133–208 per 100,000 woman-years whereas the incidences of subtypes are 121 per 100,000 woman-years for non-atypical EH and 16.8 per 100,000 woman-years for atypical[4]. EH Risk factors are chronic anovulation, polycystic ovary syndrome, obesity, tamoxifen therapy, and oestrogen-only hormone therapy[3]

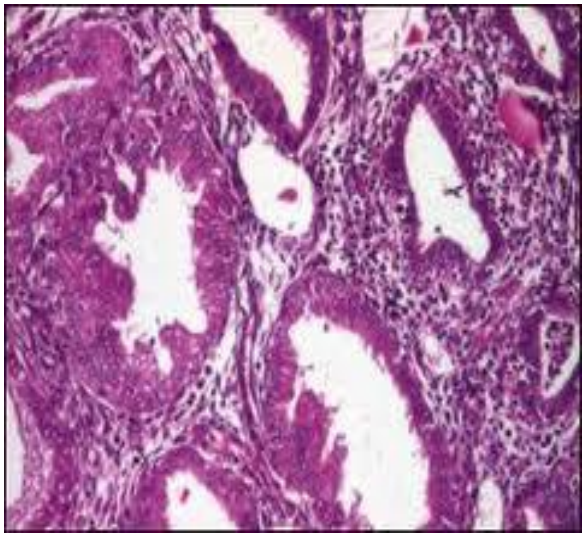
In 1994, the WHO classified endometrial hyperplasia's into 4 categories:

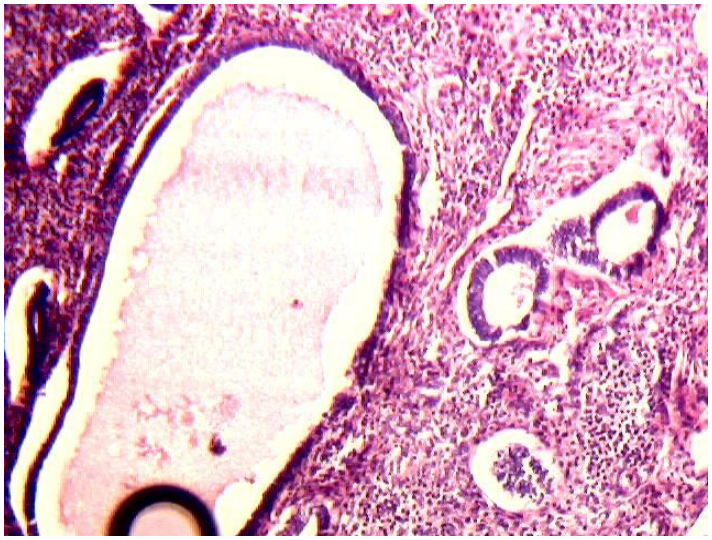
1. Simple hyperplasia without atypia,
2. Complex hyperplasia without atypia,
3. Simple atypical hyperplasia,
4. Complex atypical hyperplasia[5],[6]

Subjects and Methods

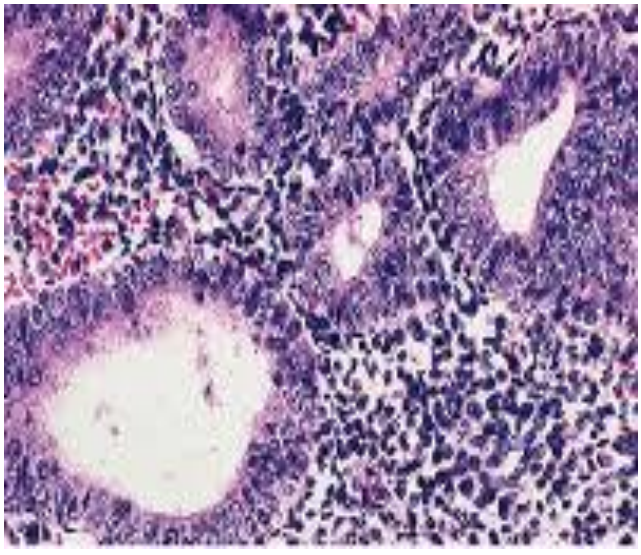
A retrospective study was carried out for cases of endometrial lesions diagnosed as endometrial hyperplasia in M.Y. hospital Indore during 10 year duration. 600 endometrial hyperplasia cases were first classified according to older WHO classification. These cases of endometrial hyperplasia were reclassified as per new WHO classification. Follow up was done to estimate how much cases undergone hysterectomies or the number of cases converted to malignancy.

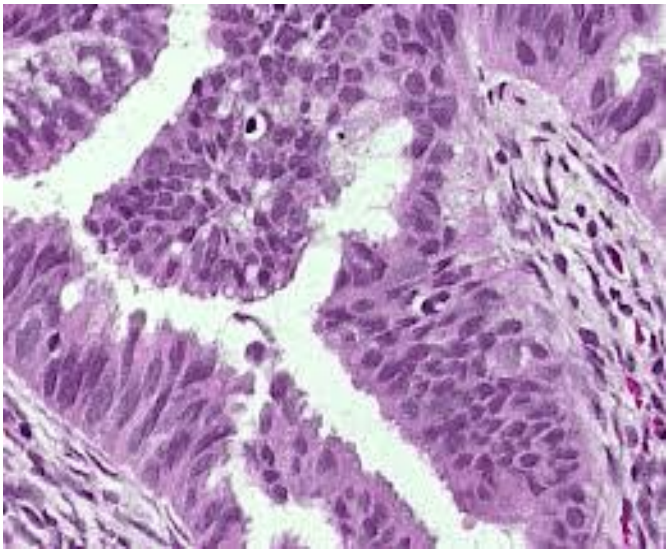
Hyperplasia without atypia





Atypical hyperplasia

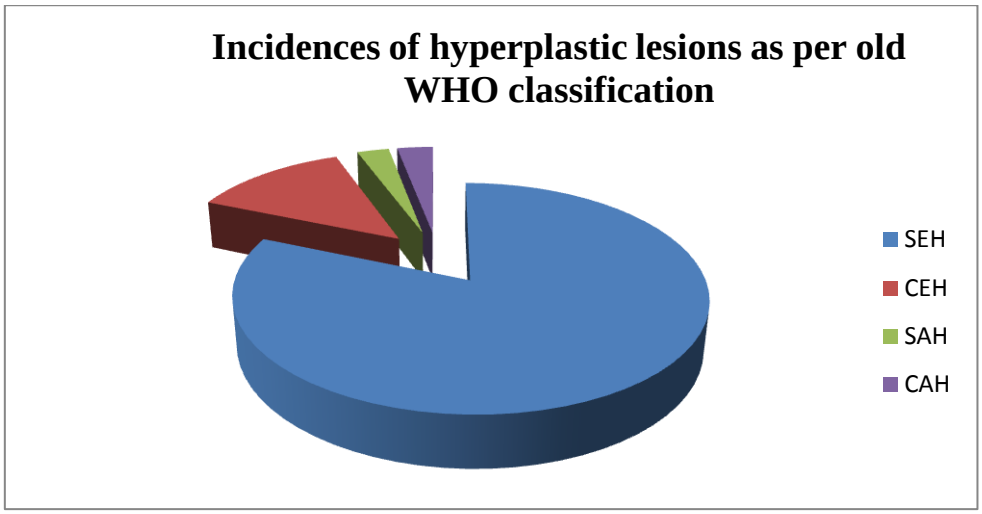




Results

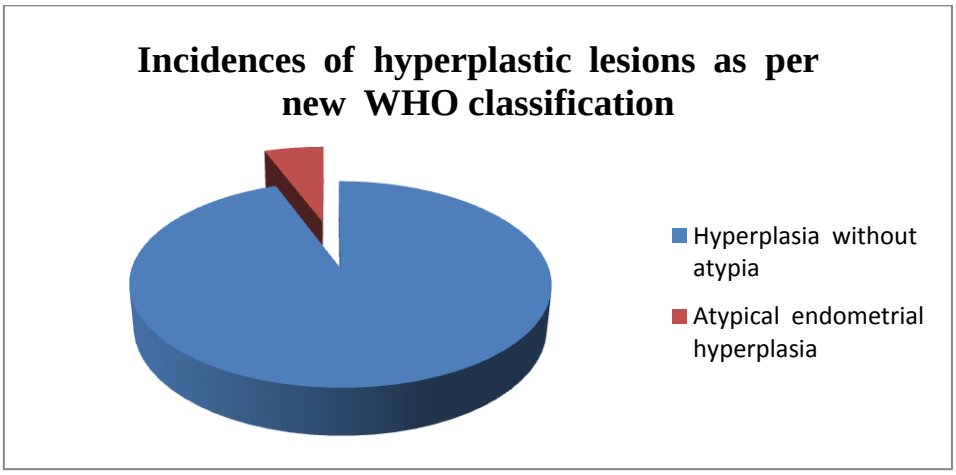
Incidences of hyperplastic lesions as per old WHO classification

Simple Endometrial Hyperplasia without atypia	488
Complex Endometrial Hyperplasia without atypia	78
Simple atypical hyperplasia	16
Complex atypical hyperplasia	18
Total	600



Incidences of hyperplastic lesions as per new WHO classification -

Hyperplastic lesions	No of cases
Hyperplasia without atypia	566
Atypical endometrial hyperplasia	34
total	600



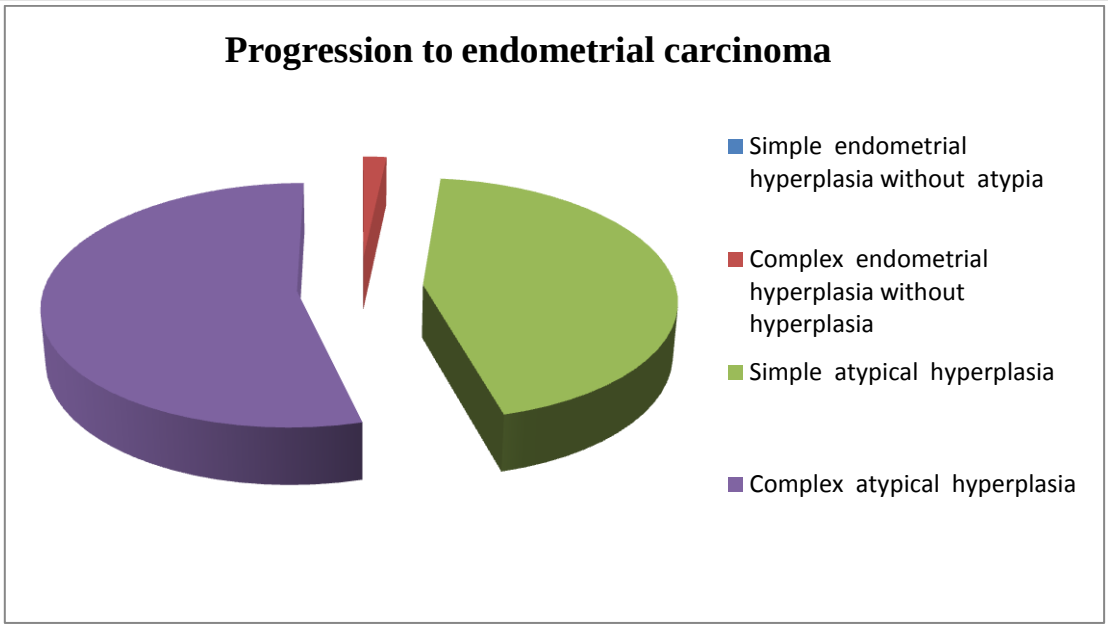
Age wise distribution

Age	No. of cases
21-40	240
41-60	330
61-80	30

According to old WHO classification

Progression to endometrial carcinoma found in

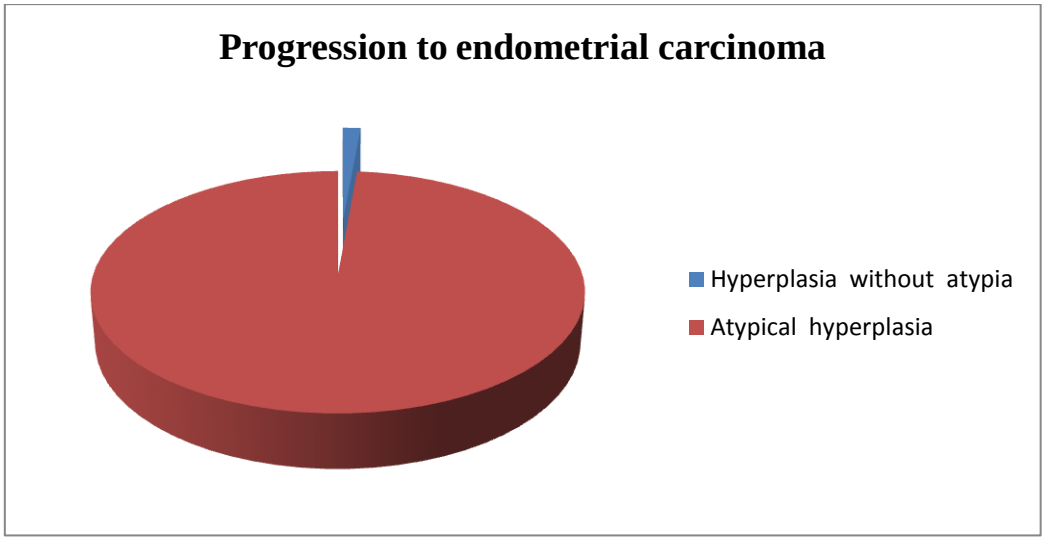
Simple endometrial hyperplasia without atypia	0%
Complex endometrial hyperplasia without atypia	1.2%
Simple atypical hyperplasia	31%
Complex atypical hyperplasia	38%



According to new WHO classification

Progression to endometrial carcinoma found in

HYPERPLASIA	Progression to carcinoma
Hyperplasia without atypia	0.5%
Atypical hyperplasia	35%



Discussion

Baak et al., 2005a; Mutter et al., 2008 suggest that ~40% of women diagnosed with EIN will have an EC diagnosed within 12 months of index biopsy.

München et all shows In up to 60% of cases of atypical endometrial hyperplasias patients have coexisting invasive cancer or are at extremely high risk of developing invasive cancer

Usan D. REED et al in Incidence of Endometrial Hyperplasia suggest that Endometrial hyperplasia simple and complex hyperplasia occurs in the early 50s and atypical in early 60s .

Baak and Mutter, 2005 found that the four-tier WHO 94 system does not straightforwardly correspond to the separate therapeutic options available (i.e. surgical, medical or observational) which may contribute to a tendency for surgical overtreatment due to the fear of

malignant progression for lesions with no underlying sinister mechanism (Baak et al., 2001).

Trimble C L et al suggest that hyperplasias without atypia should generally be treated conservatively (normalization of the cycle through weight loss, metformin; oral contraceptives; cyclical gestagens; gestagen IUD). Preventive hysterectomy should only be considered in exceptional cases (e.g., extreme obesity without any prospect of weight loss)[5],[7] The surgery should be done as a total hysterectomy, i.e., it must include removal of the cervix[7].

In present study we have found that around 35% cases turned to malignancy, where maximum cases lies in between 41 to 60 years.

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