

“HISTOPATHOLOGICAL EVALUATION IN WOMEN WITH POSTMENOPAUSAL BLEEDING AND ASSOCIATED RISK FACTORS FOR ENDOMETRIAL CARCINOMA”

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ABSTRACT: Present study was conducted over a period of eighteen months during which 174 women with postmenopausal bleeding of uterine origin were evaluated. Endometrial sample was obtained by fractional curettage and examined histopathologically. Data was analysed using Chi square (χ^2) test. Incidence of postmenopausal uterine bleeding was 4.73%. Histopathology of endometrium revealed atrophic endometrium in 48.85%. Endometrial carcinoma was detected in 10.34%. Mean age of malignancy detection was 58.77 years. Nulliparity, obesity, diabetes mellitus, hypertension were significantly associated with endometrial carcinoma ($p < 0.05$).

KEY WORDS: Postmenopausal bleeding, Histopathology, Endometrial carcinoma, Medical disorders

INTRODUCTION: Postmenopause is a challenging period for many women as they become symptomatic with gynaecological disorders for the first time in their life. It is the period twelve months after the last menstrual period. Minimal bleeding or even spotting during this period may be only manifestation pointing towards endometrial carcinoma (1). It needs prompt and thorough evaluation and if treated early it is highly curable.

OBJECTIVES

1. To find the incidence of postmenopausal uterine bleeding.
2. To study histopathological pattern of endometrium.
3. To find the incidence of endometrial carcinoma.
4. To evaluate various risk factors associated with endometrial carcinoma.

MATERIALS AND METHODS

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In a prospective study, 174 women with postmenopausal bleeding of uterine origin were studied from August 2010 to January 2012 over a period of eighteen months at Department of Obstetrics and Gynaecology in collaboration with Department of Pathology at J.L.N. Hospital & Research Centre, Bhilai (C.G).

Patients with isolated endometrial causes of postmenopausal bleeding were included in the study. Endometrial sample was obtained by fractional curettage and examined histopathologically. The data obtained was analysed by Chi Square (χ^2) test.

RESULT: In present study, incidence of postmenopausal uterine bleeding was 4.73 %. Maximum numbers of patients (47.83%) were in the age group of 51-55 years. Mean age of presentation was 55.75 years. Mean age of menopause was 48.10 ± 2.8 years (TABLE: I). In maximum number of patients (47.12%) had duration of menopause between 6-10 years (TABLE: II). Maximum numbers of patients were grand multipara (39.16%). Histopathology of endometrium revealed, atrophic endometrium in maximum numbers of patients 48.85%. (TABLE: III)

TABLE: I DISTRIBUTION OF PATIENTS ACCORDING TO AGE OF MENOPAUSE

Age of Menopause (Years)	Number of Patients (N=174)	%
41-45	29	16.67
46-50	107	61.49
51-55	34	19.55
56-60	4	2.29

TABLE: II DISTRIBUTION OF PATIENTS ACCORDING TO DURATION OF MENOPAUSE

Duration of Menopause (Years)	Number of Patients (N=174)	%
1-5	57	32.76
6-10	82	47.12
11-15	27	15.52
16-20	8	4.60

TABLE: III DISTRIBUTION OF ENDOMETRIAL PATTERN AMONG PATIENTS

Histopathology of Endometrium	Patients	
	N=174	%
Atrophic	85	48.85
Proliferative Pattern	14	8.05
Secretory Pattern	6	3.44
Benign Endometrial Polyp	17	9.77
Simple Endometrial Hyperplasia	10	5.75
Complex Hyperplasia without Atypia	14	8.05
Complex Hyperplasia with Atypia	10	5.75
Endometrial Carcinoma	18	10.34

84 patients had associated medical disorders which is statistically significant ($p < 0.05$). They are the independent risk factors associated with postmenopausal bleeding. 42.42% obese patients, 23% diabetic patients, 20% hypertensive patients and 40% nulliparous women had endometrial carcinoma which was statistically significant ($p < 0.05$).

DISCUSSION: Present study was done for evaluation of patients with postmenopausal bleeding primarily focused on endometrial carcinoma and associated risk factors. Incidence of postmenopausal bleeding is found to be 4.73% similar to (2) (3) (4)(5). Maximum number of patients (47.12%) had duration of menopause between 6-10 years, similar to (4) (6), indicating inverse relationship between duration of menopause and frequency of postmenopausal bleeding. Majority of patients had atrophic endometrium, possibly due to age related hormonal fluctuation leading to decrease in estrogen level which results in thinning or atrophy of endometrium which leads to bleeding.⁽⁷⁾ (TABLE : IV)

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TABLE: IV COMPARATIVE ANALYSIS OF HISTOPATHOLOGICAL FINDINGS WITH DIFFERENT AUTHORS

Author	A (%)	PP (%)	SP (%)	B.E.P (%)	SH (%)	CH without atypia (%)	CH with atypia (%)	Endo Ca (%)	In (%)
Gredmark T et al ⁽⁸⁾ (1995) (N=457)	49.90	4.2	1.3	2.6	9.2	8.7	1.8	8.1	14.2
Ind T ⁽⁹⁾ (1998)(N=4592)	44.74	8.8	1	8.6	13.11	-	1.9	11	10.85
Abha Singh A et al ⁽⁴⁾ (2005) (N=55)	58	9	-		-	14.5	5.9	5.4	7.2
Bharani Bharati et al ⁽¹⁰⁾ (2008) (N=25)	16	-	-	56	-	8	8	12	-
Present Study (2012)(N=174)	48.85	8.05	3.44	9.77	5.75	8.05	5.75	10.34	-

(A - atrophic, PP-proliferative pattern, SP-secretory pattern, BEP- benign endometrial polyp , SH- simple hyperplasia , CH - Complex hyperplasia, Endo Ca- endometrial carcinoma, In – inadequate sample)

The incidence of endometrial carcinoma in present study was 10.34 %. This could be due to risk factors like nulliparity , obesity, diabetes mellitus , hypertension which is consistent with previously published literature (6)(9)(11).

In obesity, there is increased peripheral conversion of adrenal androgen to estrogen by aromatization in adipocyte. Diabetes mellitus is associated with increase in estrogen level, hyperinsulinemia or elevated level of insulin like growth factor I (IGF-I). In nulliparity, there is prolonged unopposed estrogen stimulation. Estrogen induces glandular proliferation leading to thickening of endometrium ⁽¹²⁾.

Out of 174 patients, 13 patients were not able to follow up. Out of 18 cases of endometrial carcinoma, 17 underwent hysterectomy and 6 received adjuvant radiotherapy and one case was given chemotherapy as it was inoperable. All cases with Complex Hyperplasia with Atypia also underwent hysterectomy. Remaining cases were treated medically or with minor operative procedure and still they are on follow up.

CONCLUSIONS: Endometrial carcinoma is an age related pathology associated with risk factors. The neoplasia does not develop suddenly but is proceeded by histopathological changes. So, accurate detection of pathology by histopathological examination is important, not only to rule out malignancy, but also for treatment directed at the specific pathology and to avoid needless surgery.

Associated risk factors are mostly life style disease like obesity, diabetes mellitus, hypertension etc should be given due attention as prevention and treatment of these will help in reducing the incidence of endometrial carcinoma. Patient awareness, appropriate and timely evaluation of postmenopausal bleeding and treatment with good outcome is the goal.

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IMAGE 1: Histopathology of Atrophic Endometrium. Cystically dilated glands lined by flattened epithelium in atrophic endometrium.

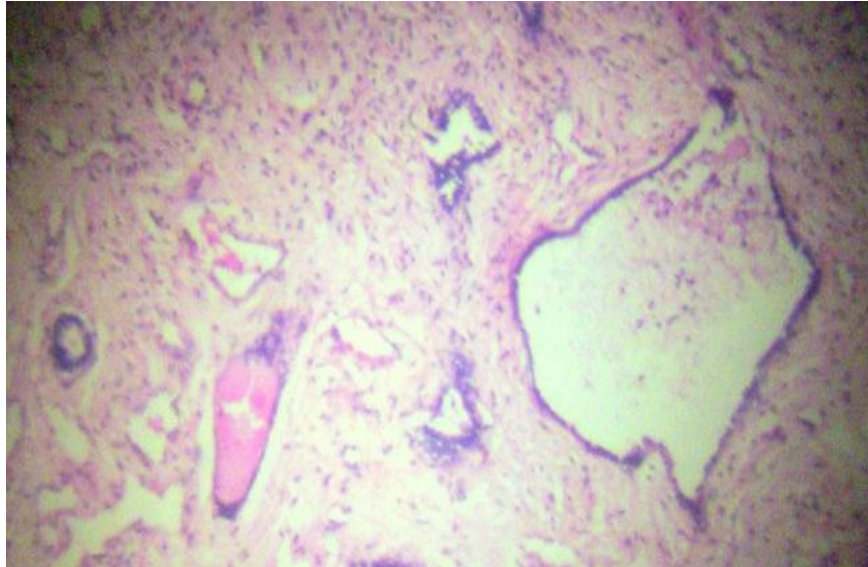


IMAGE 2: Histopathology of Endometrial carcinoma - Endometrial adenocarcinoma characterized by an irregular crowded gland with cribriform pattern and bridging. Dysplastic cells shows loss of polarity and stroma is scanty.

