

## CLINICOPATHOLOGICAL CORRELATION OF ABNORMAL UTERINE BLEEDING AT THE AGE OF 45 YEARS AND ABOVE

by

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The importance of immediate and careful investigation of a woman presenting with abnormal uterine bleeding per vaginum at an age when menopause is expected, cannot be overemphasized. When the bleeding occurs in the post-menopausal age it assumes a still greater importance. In fact, cancer of the uterus is found only in 3% of women with pre-menopausal bleeding. In others, the bleeding proves to be dysfunctional and anovulatory in type, either metropathia haemorrhagica or threshold bleeding but often no endometrial abnormality is found (Jeffcoate, 1975). Keeping this in view, this retrospective study was done in 488 cases who came with abnormal and excessive uterine bleeding at the age of 45 years or over. A clinicopathological correlation was done between various types of menstrual abnormalities and the type of endometrial tissue obtained either by curettage or hysterectomy.

### Material and Methods

Four hundred and eighty-eight women in the age group of 45 years and over, admitted in LNJP Hospital during the 3 years from 1-1-1975 to 31-12-1977 for abnormal and excessive bleeding per vaginum were selected for the study. Their menstrual history, physical examination and investigations were studied in detail.

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### Results

**Age:** Four hundred and thirty-five out of 488 women in this study belonged to the age group of 45-50 years. The oldest patient was 74 years. Table I shows the distribution of cases according to the age and various types of abnormal uterine bleeding with which the patients presented (Table I).

**Menstrual irregularity:** 200 women out of 488 came with the complaint of menorrhagia. Irregular bleeding was present in 77 cases. Polymenorrhoea and polymenorrhagia was the presenting symptom in 130 cases. Forty-nine women were admitted with post-menopausal bleeding. Continuous bleeding was present in 25 cases. Rest of the patients had slight blood stained discharge or postcoital bleeding as their main complaint.

**Examination:** On examination cervical polyp was seen or felt in 31 cases, cervicitis was found in 98 cases, cervix was hypertrophied in 20 cases, old cervical tears were present in 7 cases.

Uterus, on vaginal examination, was found to be normal in size in 197 cases, bulky in 198 cases, it was bigger than 6 weeks size of pregnancy in 93 cases. Adnexa was palpable in 22 cases.

**Operations:** Diagnostic dilatation and curettage was done in 210 cases, 30 cases had fractional curettage and 31 had polypectomy in addition. D&C and cervical biopsy was done in 33 cases. In 184 cases endometrial study was done on hysterectomy specimens.

TABLE I  
Distribution of Cases According to the Age and Types of Abnormal Uterine Bleeding

Age Groups (yrs)	Total No. of Pts.	Menorrhagia	Polymenorrhoea	Polymenorrhagia	Irregular Bleeding	Continous Bleeding	Post-coital Bleeding	Blood stained discharge	Post-menopausal Bleeding
45-50	435	198	48	82	71	25	5	1	5
51-55	32	2	—	—	6	—	—	1	23
56-60	11	—	—	—	—	—	—	—	11
61-65	7	—	—	—	—	—	—	—	7
66-70	2	—	—	—	—	—	—	—	2
71-75	1	—	—	—	—	—	—	—	1
Total	488	200	48	82	77	25	5	2	49

Total hysterectomy was done in 95 cases, total hysterectomy with bilateral salpingo-oophorectomy in 85 cases, extended hysterectomy for carcinoma body uterus in 3 cases and Wertheim's hysterectomy was done in one case for endocervical cancer.

**Endometrial Findings:** Non-secretory endometrium was the most common finding seen. Out of 488 cases, 237 showed non-secretory endometrium (48.5%). Secretory endometrium was present in 99 cases (20.2%). Endometrial hyperplasia was seen in 80 cases. Of these cystic glandular hyperplasia was present in 48 cases, adenomatous hyperplasia in 6 cases (1.2%), endometrial hyperplasia and endometrial polyps were present in 26 cases (5.3%), 13 cases showed chronic endometritis (2.6%).

Tubercular endometritis was seen in 3 cases (.61%). Atrophic endometrium was found in 20 cases.

Adenocarcinoma of uterus was found in 7 cases (1.43%). In 3 cases squamous cell carcinoma and in one endometrial sarcoma was detected. Three cases showed poorly differentiated carcinoma.

In 9 cases report came as decidua, in one as products of conception and in 2 cases as post-abortion endometritis. In none of these, history or examination was suggestive of pregnancy.

**Myometrial findings:** Out of 184 hysterectomies, fibromyoma was seen in 66 cases, adenomyosis was found in 40 cases and myohyperplasia was present in 30 cases. In 1 case endometrial sarcoma extending into myometrium and one ovary was found. In another case myometrium showed well differentiated low grade malignant sarcoma. The endometrium in this case showed non-secretory endometrium. There was 1 case of mixed mesodermal tumour. In rest of the 45

cases uterine myometrium was reported to be normal.

**Cervical Histopathology:** Most common finding on histopathology of cervix was chronic non-specific cervicitis. Out of 217 cervixes examined, 204 showed chronic non-specific cervicitis. Squamous cell carcinoma was diagnosed in 3 cases, endocervical carcinoma in 1, dysplasia and squamous metaplasia of glands in 4 cases.

Out of 31 cervical polyps, 24 were leiomyomatous polyps, 5 were adenomatous and 2 were reported to be endocervical polyps.

**Ovarian Pathology:** Out of 28 pathological ovaries removed with 89 panhysterectomies, 9 showed follicular cyst, 6 corpus luteum cyst, 6 were serious cyst-adenoma, 2 showed mucinous cyst-adenoma. In 2 cases there was granulosa cell tumour. In 1 it was associated with leiomyoma of uterus and endometrium in this case was in proliferative phase. Dermoid cyst was found in 2 cases and report came as twisted ovarian cyst in 1 case. Sarcomatous infiltration of ovary was found in 1 case of endometrial sarcoma.

**Tubal Histology:** Only 11 cases showed tubal pathology. Fimbrial cyst was present in 3 cases, paratubal cyst in 3, Salpingitis in 3, Salpingo-oophoritis in 1 and tubercular salpingo-oophoritis in 1. In this case uterine endometrium also showed tubercular endometritis.

#### Discussion

Endometrial study was divided into two groups, one in which women presented with various types of abnormal uterine bleeding before the menopause and second in which the women had menopause from 1 to 20 years and they presented with postmenopausal bleeding. The first group comprised of 439 patients and in the second there were 49 patients.

In the premenopausal age group the commonest endometrial histological finding was non-secretory endometrium which was found in 211 out of 439 cases (48.08%).

The secretory endometrium was present in 87 cases giving the incidence of 19.8%.

The abnormal bleeding per vaginum in the later years of reproductive life is thus, most often, anovulatory in type.

Pinto Rosario (1969) has reported a 47% incidence of proliferative endometrium in patients who presented as cases of dysfunctional uterine bleeding at or above the age of 40 years. In 14.6% the endometrium was in secretory phase.

Hammouda (1967) reporting on 660 patients with DUB in the menopausal and premenopausal age found progestational endometrium in 23.9%. Israel (1967) has stated that the ratio of purely oestrogen types of endometrium, proliferative and hyperplastic, to secretory endometrium in women with abnormal uterine bleeding between 40-50 years is about 3:1.

Hyperplastic endometrium, in this study, was seen in 18.9%. Nayak *et al* (1976) found 18 patients with endometrial hyperplasia and polypoidal endometrium, out of 209 patients of abnormal uterine bleeding after the age of 40 years. McBride (1959) in his series found 37.8% endometrial hyperplasia in patients over 40 years and in 12% over 50 years. According to Dewhurst (1976) 50% cases of perimenopausal bleeding are associated with endometrial hyperplasia.

Sutherland and Bruce (1971) in his series of 1000 women between the age of 40 to 45 years having dysfunctional uterine bleeding found the incidence of endometrial hyperplasia to be 52%, though Barr and Chateris (1955) found 28%.

Pinti Rosario (1969) reported 33.5% cases of endometrial hyperplasia in the age group of 40 to 50 years.

Endometrial hyperplasia which includes cystic glandular hyperplasia and adenomatous hyperplasia is due to a failure of ovulation with persistence of unripe follicles and as a result the endometrium is continuously subjected to an abnormally excessive and prolonged oestrogenic action. According to Novak (1967) this hyperplasia is an increase in both the stromal and epithelial components of the endometrium. The epithelial cells are tall and the gland pattern is not uniform, large and cystic glands being interspersed with small glands. The other variety is the adenomatous picture with tightly packed glands. Gusberg (1967) stresses the role of adenomatous hyperplasia as a pre-cancerous lesion and so does Novak (1967). Corscaden *et al* (1946) suggest that women with premenopausal hyperplasia have ten times as much chance of having a postmenopausal cancer of the endometrium as compared to the women without hyperplasia.

Atrophic endometrium was found in 17 cases in this series. Pinto Rosario (1969) reported the incidence of atrophic endometrium in cases of DUB to be 3.1%. In 1000 cases investigated by diagnostic curettage for DUB in absence of any pathology, Sutherland and Bruce (1971) reported atrophic endometrium in 1.0% and in cases of gross pelvic disease, incidence was 4.9%.

Tubercular endometritis was found in 3 cases (0.68%). Sutherland and Bruce (1971) have reported the incidence of 1%.

There were 10 cases of genital malignancy out of 439, giving an incidence of 2.2%. Among these 4 were adenocarcinoma, 2 were squamous cell carcinoma, 2

being poorly differentiated carcinoma. There were two cases of sarcoma in this group.

According to Jeffcoate (1975) cancer of uterus is found only in 3% of women complaining of premenopausal bleeding.

**Postmenopausal Group:** Forty-nine cases out of 488 presented with postmenopausal bleeding. The menopause in these cases ranged from 1 to 20 years.

Non-secretory endometrium was the commonest finding in this group, 26 cases against the 12 cases who showed secretory endometrium. In 3 cases endometrium was atrophic. Thakar and Fernandes (1964) found atrophic picture in 9.6%. Bhatnagar *et al* (1969) have reported an incidence of 40% of atrophic endometrium in postmenopausal bleeding. According to Jeffcoate (1975) in approximately 10% cases bleeding proves to be dysfunctional or caused by reawakening of ovarian function. In 10% of all cases and 30-50% of those in which haemorrhage is continuous or occurs more than once, are accounted for by malignant disease of cervix or body of uterus. In our series malignancy was seen in 6 cases (12.2%). Adenocarcinoma of uterus was present in 3 cases, squamous cell carcinoma in 1 and poorly differentiated carcinoma was the histology report in 1 case. Mixed mesodermal tumour of the uterus was found in 1 case of postmenopausal bleeding.

Paloucek *et al* (1967) found Carcinoma of body in 5% of patients with postmenopausal bleeding, the other 3% had some other malignancy of the genital tract. Bhatnagar *et al* (1969) in a study of 100 postmenopausal endometrium give 1% incidence of malignancy.

Adamson *et al* (1957) in 903 cases of postmenopausal bleeding found functional endometrial changes in 134 cases. Car-

cinoma of body uterus was found in 82 cases.

#### Summary

1. Four hundred and eighty-eight cases presenting as abnormal uterine bleeding at the age of 45 years or over were studied in detail. Forty-nine of these presented with postmenopausal bleeding.

2. Histopathology of endometrium obtained by Curettage or hysterectomy and associated uterine findings as seen on hysterectomy are reviewed.

3. In 439 patients who presented with abnormal uterine haemorrhage before the menopause non-secretory endometrium was found in 48%, secretory endometrium was present in 19.8%, hyperplasia in 18.2%. Atrophic endometrium was found in 3.8% and malignancy in 2.2%.

4. Forty-nine cases presenting with postmenopausal haemorrhage showed non-secretory endometrium in 53.06%, 24% showed secretory endometrium, atrophic endometrium was found in 6.1% and 12.2% had malignancy of uterine body.

5. Sarcoma of uterus was seen in 3 cases out of 488 giving an incidence of 0.61%.

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