

A CLINICAL AND HISTOPATHOLOGICAL REVIEW OF DYSFUNCTIONAL UTERINE BLEEDING

(One hundred and fifty cases)

by

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One hundred and fifty cases of dysfunctional haemorrhage were investigated into in the Institute of Obstetrics and Gynaecology, Hyderabad-A.P.

The term "dysfunctional haemorrhage" is given when no obvious pathology could be detected to account for the bleeding. Thus cases associated with pathological lesions were excluded, and these 150 cases conformed strictly to the clinical diagnosis of "dysfunctional haemorrhage." But at what level in the endocrine cycle is the disorder? Whether it be primarily in the ovaries or at a higher level influencing the ovaries, the aberrant action of the latter is mirrored in the pattern of the endometrium.

A few interesting points evolved during the analysis of these 150 cases. The popular teaching is that dysfunc-

tional haemorrhage occurs more frequently at either end of the child-bearing period. But in this small series the maximum number of patients was among the age group of 21-30 years and 104 out of 150 patients were between 20-40 years of age.

TABLE I
Age Group

Age group	No. of cases	Percentage
13-20 years	22	16.0%
21-30 "	66	Nil
31-40 "	38	14.6%
41-50 "	24	44.0%
Above 50 years	Nil	23.3%
Child-bearing	129	86.0%
Pre-menopausal	18	12.0%
Adolescent	3	2.0%

The above findings also correlated with the parity studies. Of the 114 parous women, 71 (47.3%) were among first and third para. The remaining 43 were distributed between fourth to eleventh pregnancies without much statistical significance.

There was no significant relation to abortion or child-birth. Thirty-seven gave a history of one or more abor-

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tions. In five of these the abortions had occurred 5, 8, 4, 3 and 7 months before the onset of the complaint. In one the complaint actually dated from an abortion. In only one patient did the complaint start from her last child-birth, one year nine months ago.

Thirty-six patients were sterile giving an incidence of 26 per cent. The endometrial patterns in these 36 were as follows: proliferative in 15, cysto-glandular hyperplasia in 14, stromal and glandular hyperplasia in 6, and secretory type of endometrium in one.

TABLE II
Sterility and Endometrium

Type of endometrium	No. of cases	Percent/ Incidence
Proliferative	15	41.6%
Secretory	1	2.7%
Cysto-glandular hyperplasia	14	38.8%
Stromal and glandular hyperplasia	6	16.6%

Type of Bleeding

While it is said that menorrhagic and metropathic types of bleeding are common, a study of the type of bleeding in this series showed that irregular bleeding and prolonged continuous

TABLE III
Type of Bleeding

Type of bleeding	No. of cases	Percent/ Incidence
Menorrhagia ..	6	4.0%
Prolonged continuous	54	36.0%
Polymenorrhoea ..	5	3.3%
Preceded by amenorrhoea	24	16.0%
Irregular bleeding ..	61	40.6%

bleeding were more common. These two types accounted for 115 out of 150 cases.

Previous treatment: Previous curettage was reported by three patients for similar complaint a year or more previously. One patient had testosterone 6 months before the curettage.

Pain: Except in four patients who complained of vague abdominal pain, and two who had dysmenorrhoea, the remaining did not complain of any pain.

Ovaries: In seven patients the ovaries were clinically palpable. The endometrium was of cysto-glandular hyperplasia in two, proliferative in two, and of stromal and glandular hyperplasia in two.

In eight patients, the ovaries were cystic, unilateral in four, and bilateral in four. In seven cases the endometrium was of the proliferative type and in one it was secretory type.

Endometrial pattern: Hyperplasia accounted for 93 cases:

Cysto-glandular hyperplasia ..	44
Stromal and glandular hyperplasia ..	44
Adenomatous hyperplasia ..	2
Atypical hyperplasia ..	3

In fifty-one of the cases there was proliferative type of endometrium and in 6 it was of secretory type.

The endometrial pattern was correlated to the type of bleeding, the size of the uterus and to the various age groups.

TABLE IV
Type of Endometrium

Type of endometrium	No. of cases	Percent/ Incidence
Proliferative	51	34.0%
Secretory	6	4.0%
Cysto-glandular hyperplasia	44	29.3%
Stromal and glandular hyperplasia	44	29.3%
Atypical hyperplasia ..	3	2.0%
Adenomatous hyperplasia	2	1.3%

TABLE V
Type of Bleeding and its Relation to Endometrial Pattern

Type of bleeding	No. of cases	Proliferative	Secretory	Cysto-glandular hyperplasia	Stromal and glandular hyperplasia	Atypical hyperplasia	Adenomatous hyperplasia
Menorrhagia ..	6		16.6%	16.6%	3.2%		
Continuous prolonged bleeding	54	31.4%		27.7%	24.7%		
Polymenorrhoea	5	100.0%					
Preceded by amenorrhoea ..	24	16.6%	4.1%	70.8%	45.8%	4.1%	
Irregular ..	61	40.8%	6.5%	16.3%	31.1%		1.6%

TABLE VI
Type of Endometrium in Relation to the Size of Uterus

Size of uterus	No. of cases	Proliferative	Secretory	Cysto-glandular hyperplasia	Stromal and glandular hyperplasia	Atypical hyperplasia	Adenomatous hyperplasia
Normal ..	119	45	4	30	36	2	1
Bulky ..	22	3	1	11	6	1	1
Enlarged ..	9	3	1	3	2	—	—

TABLE VII
Type of Endometrium among Various Age Groups

Age group	No. of cases	Proliferative	Secretory	Cysto-glandular hyperplasia	Stromal and glandular hyperplasia	Atypical hyperplasia	Adenomatous hyperplasia
13-20	22	31.1%		22.7%	31.1%		4.5%
21-30	66	45.4%	3.0%	34.7%	21.2%	1.5%	1.5%
31-40	38	34.2%	10.5%	23.7%	34.2%	2.6%	
41-50	24	8.3%		25.0%	41.5%	4.1%	

TABLE VIII
Haemoglobin

Percentage haemoglobin	No. of cases
30 to 40 per cent	8
41 to 50 per cent	38
51 to 60 per cent	53
61 to 70 per cent	51

In fifty-four patients who complained of prolonged continuous bleeding, the endometrium showed proliferative type in 31.4 per cent, cysto-glandular hyperplasia in 27.7 per cent, stromal and glandular hyperplasia in 24.7 per cent.

In sixty-one patients who complained of irregular type of bleeding, 40.8 per cent showed proliferative type of endometrium, 31.1 per cent had a stromal and glandular hyperplasia, 6.5 per cent had secretory type of endometrium and 1.6 per cent had adenomatous hyperplasia.

All the five patients with polymenorrhoea had a proliferative type of endometrium.

In twenty-four patients where there was history of preceding period of amenorrhoea, 70.8 per cent showed cysto-glandular hyperplasia, 45.8 per cent had stromal and glandular hyperplasia, 16.6 per cent had proliferative, 4.1 per cent had secretory and 4.1 per cent had atypical hyperplasia.

In six patients who had menorrhagic type of bleeding, 16.6 per cent had secretory type of endometrium, 16.6 per cent had cysto-glandular hyperplasia and 3.5 per cent had stromal and glandular hyperplasia.

The Significance of a Secretory Type of Endometrium

This controversial question is yet to be clarified. Sub-nuclear vacuolation and the presence of glycogen particles have been demonstrated in the presence of estrogens alone and in the absence of progesterones.

Bartelmez and Bensley (1932) describe 2 types of secretion. When the lumen of the glands in endo-

metrial hyperplasia occasionally contains a secretion, it is similar to the Type I secretion described by Bartelmez and Bensley and not to be confused with Type II secretion of the luteal phase which is mucinous and laden with glycogen.

It is evident that bleeding can occur from any type of endometrium. The latter is not the cause of the bleeding. It is the variation in the level of the supporting hormones and probably in the vasculature of the endometrium that leads to the bleeding episodes.

Squamous Metaplasia

In five of the endometria studied, squamous metaplasia was reported. This occurs in the glandular epithelium and the more probable view is that these cells are derived by transformation of the glandular epithelium since intermediate stages have been demonstrated and not from reserve cells as believed before.

Necrobiosis and Infection

In four slides there was definite incidence of infection. In two there were areas of necrobiosis with thrombosis in the blood vessels, round cell infiltration and areas of degeneration.

Atypical Hyperplasia

When the pathologist pronounces the presence of atypical hyperplasia of the endometrium, the clinician is alerted and very often leans towards hysterectomy.

This report was given in three of the patients.

Case I:

Patient was 25 years of age with menorrhagic type of bleeding from a normal-sized uterus. She had one child 7 years ago. There was stromal hyperplasia with

plenty of mitosis and irregular glandular pattern.

Case II:

This patient was the mother of ten children. The last child was 9 years old. She was 50 years old and gave a history of preceding period of amenorrhoea, before the onset of the complaint. The uterus was bulky and the endometrium showed irregular glandular pattern, with stromal hyperplasia and mitosis.

Case III:

Patient was 40 years of age. She had one child, 25 years ago. She had mild hypertension 140/90 mms. of Hg. She had menorrhagic type of bleeding from a normal sized uterus. Endometium showed atypical hyperplasia.



Fig. 1
Microphotograph showing squamous metaplasia of glands in hyperplastic endometrium (H. P. 10 x 45 - 450).



Fig. 2
Microphotograph showing atypical hyperplasia of endometrium (L. P. 6 x 10:60).

In patients No. 2 and 3 hysterectomy was performed. There was no evidence of corpus carcinoma. The curettage revealed atypical hyperplasia. Such uteri are better removed, as according to Halban "Not carcinoma, but better out."

Discussion

The term 'dysfunctional haemorrhage' is given when there is no detectable pathology to account for the bleeding. It is incumbent therefore that before such a diagnosis is made, a thorough and minute search must be made to exclude any pathological lesion. Such a thorough study is possible only through a surgical approach and a careful histopathological study of the tissues. Sutherland had reported an incidence of 13.9% of organic pathologic lesions among 1000 cases of abnormal uterine bleeding. In his series of patients under 20 years of age the incidence of tuberculosis of the endometrium was 4%. This emphasizes the necessity of curettage as a diagnostic aid in every patient irrespective of age and marital status.

The best time to do the curettage is in the premenstrual phase. But in patients with a completely irregular cycle, accurate planning of the time of operation is not possible. Curettage after 5th day of bleeding will help exclude "irregular shedding". Any interpretation of the histological picture should be correlated to the time interval between the onset of bleeding and the curettage.

While dysfunctional haemorrhage is more common at either end of child-bearing period, statistical figures are high for the 2nd and 3rd decade

groups because patients in these groups seek medical aid more readily and also the disease tends to rectify itself spontaneously in the extreme age groups.

Prolonged and continuous bleeding and irregular bleeding appear to be the common forms of the disease, with anovular type of endometrium preponderating. It is evident that there is no constant relationship between the pattern of endometrium and the type of bleeding in cases of functional uterine haemorrhage. Bleeding could occur from any type of endometrium including an atrophic endometrium.

Though hysterectomy is reserved for the older age groups and when hormonal and conservative methods have failed to relieve the patient, it is more freely resorted to when the endometrium shows atypical hyperplasia.

This is because atypical hyperplasia has to be differentiated from endometrial carcinoma. There is the possibility that atypical hyperplasia may be a pre-malignant condition. Gasberg (1954) reported that 10% were associated with or followed by adeno-carcinoma and in a further 10% it was difficult to distinguish between low grade carcinoma and adenomatous hyperplasia. The aberration is seen in the epithelium leading to atypical changes in the glands which appear close together and are irregular in shape with minimal

cystic change. The epithelial cells are larger than in cystic hyperplasia and reduplication producing irregular layers may occur. Nuclear hyperchromatism and mitosis are frequent.

In 5 patients squamous metaplasia was present. This change is characteristically seen in relation to the glands and plaques or nests of squamous cells may project into the lumen. The changes can be temporary or persistent. Usually occurring in women under forty years, the change may be by transformation of the glandular epithelium or derived from certain indifferent cells beneath the columnar epithelium. Their significance is not established. When complete epidermization takes place it is known as Ichthyosis. Though squamous metaplasia is observed in endometrial carcinoma there is no evidence of its being precancerous.

Summary

A statistical survey of one hundred and fifty patients with dysfunctional haemorrhage is presented.

The incidence of the disease in various age groups, and its relation to parity were studied. Studies, correlating the type of bleeding, the pattern of endometrium, size of the uterus and the age incidence, were done.

The significance of squamous metaplasia and atypical hyperplasia is discussed.