

## DYSFUNCTIONAL UTERINE HAEMORRHAGE

### Correlation of Endometrial Pattern with Clinical Behaviour

by

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The term dysfunctional uterine haemorrhage is an unfortunate one. It is used to cover all forms of abnormal uterine bleeding for which no detectable pathology and, therefore, no physical signs can be found by ordinary clinical examination. It is customary to include under these conditions the endometria which show certain features as a result of disturbed endocrine influence. Sutherland (1949) found a large number of cases in which no departure from the normal could be discovered by the usual histological examination. He divided his cases into the following groups:—

- (1) Endometrial hyperplasia.
- (2) Irregular shedding.
- (3) Irregular ripening of the endometrium.
- (4) Endometrial atrophy.
- (5) Apparently normal endometrium.

It was shown that abnormal bleeding can occur from any type of endometrium.

The present study consists of a

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series of 192 cases of dysfunctional uterine bleeding who were admitted for treatment in Department of Obstetrics and Gynaecology, Nilratan Sircar Medical College and Hospital, Calcutta, during the year 1962. The study was mainly aimed at the correlation of endometrial pattern with the clinical behaviour presented by the patient.

#### *Material for Study and Results*

In this series, cases with palpable lesions like fibroids or endometriosis have not been included. Certain associated clinical conditions were found in some cases (vide Table 6) e.g. cystic ovaries, genital prolapse and cervical erosion. The curettage was performed between 24th-28th day of the cycle in those where the cycle was regular, in others it was done approximately three weeks after the previous menstrual period.

#### *Incidence*

The total gynaecological admissions (not including abortions of any kind) were 1,530 during the year of study and the total cases admitted as dysfunctional uterine haemorrhage on clinical diagnosis, were 192, thereby giving an incidence of 12.6%. There were 164 cases with true dysfunc-

tional uterine bleeding. In the remaining 28 cases histological examination revealed a variety of conditions (vide Table-I).

TABLE I  
True Dysfunctional Uterine  
Haemorrhage—164 cases

Swiss-cheese Hyperplasia—	
48 cases .. .. .	29.2%
Proliferative Phase—	
32 cases .. .. .	19.6%
Normal Endometrium—	
72 cases .. .. .	43.9%
Atrophic Endometrium	
12 cases .. .. .	7.3%
<i>Miscellaneous—28 cases</i>	
T.B. .. .. .	2
Atrophic Chorionic Villi .. .. .	18
Decidual Changes .. .. .	6
Senile Endometrium .. .. .	2

*Swiss-Cheese Hyperplasia*

The term hyperplasia or Swiss-cheese hyperplasia has been used to refer to endometria showing both glandular and stromal hyperplasia. There were altogether 48 cases in this group showing an incidence of 29.2%.

*Proliferative Phase*

Under this group have been included the endometria which showed the typical proliferative phase characterised by tortuosity of the glands with gradual widening of the lumina and absence of any secretory activity inside the gland. The stroma did not

show any evidence of hyperplasia. There were altogether 32 cases in this series showing an incidence of 19.6%.

*Normal Endometrium*

This term is used for cases which showed the endometrial pattern consistent with the day of the cycle. As a matter of fact the term secretory phase would have been a better one, but to keep conformity with Sutherland the term normal endometrium has been used. By far the biggest number of cases were in this series. There were altogether 72 cases presenting an incidence of 43.9%.

*Atrophic Endometrium*

This term has caused considerable confusion as being a cause for dysfunctional uterine bleeding. Since various authors have used this nomenclature the same term is being used here. The important features were that the curettage of the patients in this group showed very scanty scraping with evidence of atrophy of stroma and glands. There were altogether 12 cases showing an incidence of 7.3%.

*Other Types of Lesion*

The chief types of lesions which were found on histological examination of the curetted material were tuberculosis, atrophic chorionic villi, decidual reaction, and senile endometritis (vide Table-I).

Correlation with Clinical Findings  
TABLE II  
Age

	Below 20	21-30	31-40	41 and above
Swiss cheese ..	8	14	10	16
Proliferative ..	0	18	10	4
Normal ..	6	18	32	16
Atrophic ..	0	0	4	8



TABLE III

## Parity

	0	1-3	4-6	Above 6
Swiss cheese ..	14	16	10	8
Proliferative ..	4	10	12	6
Normal ..	8	26	20	18
Atrophic ..	5	5	0	2

TABLE IV

## Symptoms

	Menorrhagia	Metropathia haemorrhagia	Irregular periods	Menorrhagia metrorrhagia	Bleeding
Swiss cheese ..	18	8	10	8	16
Proliferative ..	10	4	18	0	3
Normal ..	42	10	18	2	0
Atrophic ..	3	3	6	0	3

*Swiss-cheese Hyperplasia*

It can be seen from Table II that the maximum number of cases (33.3%) was in age group 41 years and above, the next group (29.1%) was between 20-30 years. Table III shows that the highest number of cases (33.3%) was in the group between first and the third pregnancy. There were 14 cases (29.1%) in the nulliparous group. Incidentally in the nulliparous group the commonest type of endometrial pattern was Swiss-cheese hyperplasia. Table IV shows that the most frequent complaints were menorrhagia (18 cases) and irregular cycle (10 cases). The typical metropathia haemorrhagica of Schroeder was found in 8 cases only; 16 patients were admitted with bleeding.

*Proliferative*

Table II shows the highest number of cases (65.2%) was in the age group between 20-30 years of age. Table III shows the biggest number of cases

between Paras 4 and 6. There was decline in the number of cases with increasing number of parity and also those having no children or a relatively small family. Table IV shows this type of endometrium was associated with various types of symptoms. The largest number of them had history or irregular cycle (18 cases) and the next with menorrhagia (10 cases); 8 patients were admitted because of bleeding.

*Normal Endometrium*

Table II shows the highest incidence of this type of endometrium (44.4%) was between 31-40 years of age. Table III shows the largest number of cases between paras 1-3. Though no significant correlation could be ascertained in different groups, normal endometrium was relatively uncommon in the group of nulliparous cases.

*Atrophic Endometrium*

Table II shows the biggest number of cases between age group of 20-30

years. None of the cases below 20 years of age showed either proliferative or atrophic changes. Table III shows that this type of endometrium was common in two extremes of parity. In Table IV the chief presenting symptoms were irregularities in menstrual cycle (6 cases) both epi- and hypermenorrhic type. Only 8 patients were admitted with bleeding.

Even in Swiss-cheese hyperplasia the distribution was practically even. Small sized uterus was found practically in all types of endometrium and no significant correlation could be reached.

Cystic ovaries were present in cases showing Swiss cheese as well as normal endometrium. No cystic ovaries were found in the groups of proliferative and atrophic endo-

TABLE V  
Size of Uterus

	Normal Size	Bulky	Small
Swiss Cheese ..	20	24	4
Proliferative ..	16	12	4
Normal .. ..	38	32	2
Atrophic .. ..	10	0	2

In the series of Swiss-cheese hyperplasia there were 24 cases with bulky uterus (50 per cent) and 20 cases with normal sized uteri (41.6 per cent). In cases showing proliferative phase the majority (16 cases) had normal sized uterus and 12 cases bulky uterus. Those showing normal endometrium 38 cases had normal uterus and 32 cases had bulky uterus. In the series of atrophic endometrium majority (10 cases) had normal uterus. It thus shows that excepting in cases of Swiss cheese hyperplasia, there was predominance of normal sized uterus.

metrium. Other associations like prolapse and erosion cervix were found in some cases and no significant correlation could be attained.

The majority of the cases having Swiss cheese endometrium fell in the group having more than 7.1 gms. Hb. There were 8 cases in the group between 5.1-7 gms. Hb. and 4 cases between 3.1-5 gms. Hb. The cases showing proliferative, normal and atrophic endometria were all above 5.1 gms. Hb. level. The incidence of more severe type of anaemia was associated with those having Swiss cheese pattern of endometrium.

TABLE VI  
Associated Lesions

	Cystic Ovary	Prolapse	Erosion Cervix
Swiss Cheese ..	6	0	4
Proliferative ..	0	0	2
Normal .. ..	6	6	4
Atrophic .. ..	0	0	0



TABLE VII  
*Haemoglobin Level*

	Below 3 gms.	3.1-5 gms.	5.1-7 gms.	7.1-10 gms.	Above 10 gms.
Swiss Cheese	0	4	8	18	18
Proliferative	0	0	0	18	14
Normal	0	0	6	44	22
Atrophic	0	0	2	4	6

### Discussion

The reports with regard to the correlation of endometrial pattern and clinical behaviour in cases admitted as dysfunctional uterine haemorrhage are not very rich in the literature. Sutherland in his series of 1000 cases found about 14% cases had other associated lesions behaving clinically as dysfunctional uterine haemorrhage. This was also the observation of the present investigations. There were 28 cases (14.5%) showing miscellaneous lesions like tuberculosis of the endometrium, disturbances due to pregnancy and senile endometrium. Of these miscellaneous group 85.7% were due to disturbances of pregnancy. It shows that in 12.5% cases of the entire series, the cause of bleeding clinically diagnosed as dysfunctional uterine haemorrhage were, as a matter of fact, due to disturbed pregnancy. The incidence of endometrial tuberculosis in this series was 1.04%. Sutherland (1943) found an incidence of 1.1% of 5.521 curetted specimens where as Sharman (quoted by Bourne, 1958) found no less than 5% of all cases of female sterility having endometrial tuberculosis, mostly unsuspected. Thus many authorities, including Bourne, are of the opinion that all women having menorrhagia should be subjected to curettage for studying the endo-

metrial pattern and also to exclude tuberculosis.

### *Swiss Cheese Hyperplasia*

Until recently most authors regarded Swiss cheese hyperplasia as almost the only type of endometrium which caused the so called dysfunctional uterine bleeding. Jones (1938) reported 25% cases had hyperplasia and Sutherland (1943) showed a fairly close approximation (30.8%). In the present series Swiss cheese hyperplasia was found in 29.2% cases only. Sutherland used the term Endometrial Hyperplasia to refer to excessive glandular development in the proliferative phase. There has been some confusion with regard to the term hyperplasia. Some limit it to full-blown growth picture, others extending its use to include minor degrees of growth effect, perhaps not distinguishable from those seen in the 1st half of normal cycle. According to Novak (1958), in the latter group, the term hyperplasia is not justifiable on histological grounds, and perhaps it would be better to speak of the entire group as proliferative or non-secretory, reserving the term hyperplasia for those cases in which genuine hyperplastic changes are observed. Novak includes under hyperplasia an increase in the number of tissue elements both epithelial



and stromal. The surface epithelium is taller than normal while that of the glands is likewise tall with heavily stained nuclei which not infrequently show mitosis. Some mitotic activity may likewise be seen in the stroma, which is compact looking and abundant. The most distinctive feature is the gland pattern which does not show any uniformity in size and configuration. Some are large and cystic, while others in the immediate vicinity are small. This is the picture of so-called 'Swiss cheese Pattern'—suggested by various authors.

In the present series the maximum number of cases (33.3%) were in the age group of 41 years and above. The next (29.1 per cent) being between 20 and 30 years. Though it was fairly common in the nulliparous group, the highest incidence (33 per cent) was between 1st and 3rd para. The commonest symptom presented by the patient was menorrhagia. Among cheese pattern the typical metropathia haemorrhagica was present in 8 cases (16.2 per cent) only. Incidentally in the entire series this type of menstrual irregularity was present in 15.2 per cent cases only.

#### *Apparently Normal Endometrium*

In Sutherland's series, apparently normal endometrium, i.e. a nature of endometrium corresponding to the particular day of the cycle, the so-called secretory phase was found in a vast majority of cases (63.2%). In the present series also, 43.9% cases showed apparently normal endometrium. The maximum number of patients was between 31 and 40 years and the commonest parity was between 1 and 3. It has

been also shown that the vast majority of them had menorrhagia and the next common symptom was irregular periods. They showed practically all degrees of the size of the uterus, though the majority had normal sized uteri. Cystic ovaries were associated with 6 cases in the whole series. This correlation is very interesting, not many reports having been found on this aspect in the literature. It may be that some variation of the complex mechanism which lead upto menstruation, is responsible for this functional aberration which are undetectable by the microscope.

#### *Proliferative Phase*

Simple continuation of the proliferative phase without any evidence of active hyperplasia was present in 19.6% cases. The chief symptoms resulting were irregular periods and the next common variety was menorrhagia. The maximum numbers were between 20-30 years and were much commoner in parous people. The uterus was normal in size in 16 cases and bulky in 12. This also is very difficult to explain with our present knowledge of menstrual machinery excepting possibly some functional aberration of the menstrual cycle.

#### *Atrophic Phase*

The presence of atrophic endometrium in some cases of dysfunctional uterine haemorrhage has given rise to considerable confusion. In the series of Arenas and Foix (1954) quoted by Bourne (1958) the incidence of atrophic endometrium in cases of dysfunctional uterine



haemorrhage was an average of 7.1%. In the present analysis 7.3% of the cases of true dysfunctional haemorrhage showed atrophic endometrium. The majority of them were admitted for irregular periods and the highest number of cases were in the age group 41 years and above.

### Summary

1. A series of 192 cases admitted on the clinical diagnosis of dysfunctional uterine haemorrhage at the Department of Obstetrics and Gynaecology, Nilratan Sircar Medical College and Hospital during the year 1962 have been studied.

2. The study was mainly aimed at the correlation of endometrial pattern with the clinical behaviour presented by them.

3. In the present series, 14.5% cases showed miscellaneous lesions like tuberculosis of the endometrium, disturbances due to pregnancy (atrophic chorionic villi and decidual changes) and senile endometrium.

4. In cases admitted as dysfunctional uterine bleeding — 12.5% were histologically proved to be due to disturbed pregnancy. The incidence of endometrial tuberculosis was 1.04%.

5. The maximum number of cases (43.9%) showed normal endometrium. Swiss cheese hyperplasia was present in 29.2% cases. The remaining cases showed endometrium in proliferative phase (19.6%) and atrophic endometrium (7.3%).

6. Swiss cheese hyperplasia was found to have highest incidence in the age group 41 years and above. The next incidence was between 20 and 30 years of age.

7. The typical metropathia haemorrhagica was not found to be very common. It was found in 15.2 per cent of the entire series of true dysfunctional uterine haemorrhage. The commonest symptom was menorrhagia.

8. In cases of Swiss cheese hyperplasia uterus was found to be normal in 41.6% cases, and bulky in 50% cases.

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