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Histopathological Study of Endometrium in Dysfunctional Uterine Bleeding

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Introduction

Women suffer from many gynaecological diseases. One among them is dysfunctional uterine bleeding, which has significant morbidity in that it interferes with their personal, family and social life. It is estimated that 9-30% of women of reproductive age suffer from menorrhagia. The prevalence increases with age, peaking just before menopause. Because most cases are associated with anovulatory menstrual cycles, adolescent and perimenopausal women are particularly vulnerable. About 20% of affected individuals are in the adolescent age group and 50% of affected individuals are aged between 40-50 years.

The term dysfunctional uterine bleeding is used to describe abnormal uterine bleeding for which no specific cause has been found. It is the diagnosis of exclusion.

The endometrial biopsy is chosen to evaluate DUB because it has several advantages over other diagnostic methods. The hormonal assay is very expensive and such laboratories are not available in rural areas.

Ultrasonography as a diagnostic tool has limited value in DUB, except in atrophy and hyperplasia. Other investigations such as hysteroscopy and hysterosalpingography are mainly helpful in diagnosing organic pathology.

Endometrial curettage is relatively inexpensive and accurate as an office procedure. The only disadvantage of endometrial biopsy is that, it is an invasive procedure.

Methodology

Source of data- RNT Medical College, Udaipur

Inclusion criteria- All cases of dysfunctional uterine bleeding received by Department of Pathology, RNT Medical college. DUB cases forming part of hysterectomy were also included in study.

Exclusion criteria- Autolysed specimen

Number of cases- 100

Method of collection of data- The study material consisted of endometrial curettings from 100 patients attending Gynaecological OPD during a period between August 2013 to December 2014. These patients were having a clinical diagnosis of DUB and were in the age group of 17-50 years.

Endometrial curettage samples were fixed in 10% formalin and histopathological slides were prepared and Hematoxyline and Eosin staining was done. Special stains like Periodic acid-Schiff staining (PAS) and reticulin was performed when warranted.

Results

100 cases of DUB were analysed in the following ways:

1. Distribution of DUB cases according to various age groups (Table 1)
2. Relation of DUB with parity(Table 2)
3. Bleeding pattern in DUB patients (Table 3)
4. Type of endometrial pattern in 100 cases of DUB (Table 4)
5. Type of bleeding patterns in 100 DUB cases:

- In relation with Menorrhagia (Table 5)
- In relation with Metrorrhagia (Table 6)
- In relation with Polymenorrhagia (Table 7)
- In relation with Oligomenorrhoea (Table 8)
- In relation with Menometrorrhagia (Table 9)

Table 1: Distribution of 100 DUB cases according to various age groups

Age group	No. of cases	Percentage
<20	1	1.0
20-25	4	4.0
26-30	5	5.0
31-35	16	16.0
36-40	31	31.0
41-45	21	21.0
46-50	22	22.0
Total cases	100	100.0

The above table shows DUB in different age groups and the maximum incidence of DUB was seen in females within age group of 36-40 years.

Table 2: Relationship of DUB with parity

Type of parity	No. of cases	Percentage
Primipara	7	7.0
Multipara (1-3)	71	71.0
Grand Multipara	19	19.0
Unmarried	3	3.0
Total	100	100.0

The above chart shows relationship of DUB with parity. In unmarried DUB was seen only in 03 cases. Maximum incidence was seen in multiparous women.

Table 3: Bleeding pattern in 100 DUB patients

Type of bleeding	No. of cases	Percentage
Menorrhagia	80	80
Metrorrhagia	13	13
Polymenorrhagia	3	3
Oligomenorrhoea	2	2
Menometrorrhagia	2	2

The above chart depicts the different patterns of bleeding in DUB. Maximum number of patients presented with menorrhagia whereas only 2 females came with oligomenorrhoea, the same incidence was seen with menometrorrhagia.

Table 4 Types of endometrial pattern in 100 cases

Type of Endometrium	No. of cases	Percentage
Proliferative Phase	50	50
Secretory Phase	17	17
Cystoglandular Hyperplasia	15	15
Adenomatous Hyperplasia	01	1.0
Endometrial Polyp	01	1.0
Atypical Hyperplasia	01	1.0
Arias-Stella Reaction	02	2.0
Chronic Endometritis	02	2.0
Pill Endometrium	02	2.0
Mixed Endometrium	05	5.0
Lytic Endometrium	04	4.0
Total	100	100

The above table depicts the endometrial pattern encountered in 100 DUB patients. Different histopathological types of endometrium patterns were studied.

Table 5 Correlation of Menorrhagia in relation to endometrial pattern

Type of Endometrium	No. of cases	Percentage
Proliferative Endometrium	42	42
Secretory Endometrium	12	12
Cystoglandular Hyperplasia	10	10
Adenomatous Hyperplasia	01	01
Arias-Stella Reaction	02	02
Complex Atypical Hyperplasia	01	01
Mixed Endometrium	04	04
Lytic Endometrium	04	04
Pill Endometrium	02	02
Chronic Endometritis	02	02
Total	80	80

There were 80 cases of DUB presenting with menorrhagia out of which 42 females had endometrium in proliferative phase.

Table 6 Correlation of Metrorrhagia in relation to endometrial pattern

Type of Endometrium	No. of cases	Percentage
Proliferative Endometrium	04	04
Secretory Endometrium	04	04
Cystoglandular Hyperplasia	03	03
Endometrial Polyp	01	01
Mixed Endometrium	01	01
Total	13	13

Table 7 Correlation of Polymenorrhagia in relation to endometrial pattern

Type of endometrium	No. of cases	Percentage
Proliferative Endometrium	02	2.0
Secretory Endometrium	01	1.0
Total	03	3.0

Table 8 Correlation of Oligomenorrhoea in relation to endometrial pattern

Type of Endometrium	No. of cases	Percentage
Cystoglandular Hyperplasia	01	1.0
Total	01	1.0

Table 9 Correlation of menometrorrhagia in relation to endometrial pattern

Type of Endometrium	No. of cases	Percentage
Proliferative Endometrium	02	2.0
Total	02	2.0

Discussion

- Patients belonging to different age groups (between 17-50 years) were studied. The maximum incidence of DUB was in the 36-40 years age group. The minimum incidence of DUB was in 17-20 years age group.
- Patients belonging to various types of parity were studied. Maximum incidence of DUB was seen in the parity of 1-3 (71%). Minimum incidence was seen in nulliparous women (3%).
- Various types of endometrial patterns were studied. The incidence of proliferative endometrium was 50%, secretory endometrium 17%, cystoglandular hyperplasia 15%, adenomatous hyperplasia 1%, endometrial polyp 1%, atypical hyperplasia 1%, arias-stella reaction 2%, chronic endometritis 2%, pill endometrium 2%, mixed endometrium 5% and lytic endometrium was 4%.
- In the age group of 17-20 years only one case of proliferative endometrium was seen.
- In the age group of 21-30 years, 66.66% of proliferative phase, 22.22% of cystoglandular hyperplasia and 12.01% of mixed endometrium were seen.
- In the age group of 31-40 years 45.83% of proliferative phase, 22.97% of secretory phase, 12.5% of cystoglandular hyperplasia, 4.86% of arias-stella reaction, 2.08% of pill endometrium, 6.25% of mixed endometrium and 4.16% of lytic endometrium were seen.
- In the age group of 41-50 years 50% of proliferative endometrium, 14.28% of secretory phase, 16.66% of cystoglandular hyperplasia, 2.38% of adenomatous hyperplasia, 2.38% of endometrial polyp, 2.38% of atypical hyperplasia, 2.38% of chronic endometritis, 2.38% of pill endometrium, 2.38% of mixed endometrium and 4.76% of lytic endometrium.
- No cases of irregular shedding and irregular ripening of endometrium were seen.
- Incidence of associated organic pathology was 03%. One case of endometrial polyp and two cases of chronic endometritis were seen.
- The most common bleeding pattern encountered in DUB was menorrhagia. 80% patients presented with menorrhagia, followed by metrorrhagia which was seen in 13% of cases.

Conclusion

Study of endometrial microscopy in women with DUB is helpful in distinguishing anovulatory from ovulatory DUB and to diagnose hyperplasia and carcinoma of endometrium.

Dilatation and curettage reveals endometrial pattern in DUB in different cases, varying from normal proliferative and secretory patterns to irregular shedding, irregular ripening and cystoglandular hyperplasia patterns. Dilatation and curettage is helpful to exclude other organic pathology, which mimics dysfunctional uterine bleeding like endometrial polyp, chronic endometritis, endometrial carcinoma etc.

Therefore conclusion is that dilatation and curettage is useful for diagnosis, to assess therapeutic response and to know the pathological incidence of organic lesions in cases of dysfunctional uterine bleeding prior to surgery.

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