

Study of Correlation of Histopathological Patterns of Endometrium in Dysfunctional Uterine Bleeding

Dr. Yogesh Parmar¹, Dr. Kritika Pandey²

¹Assistant Professor, Department Medical College Vadodara, India

²Senior Resident, Department Medical College Vadodara, India

Abstract: *Background: Abnormal uterine bleeding (AUB) earlier known as Dysfunctional uterine bleeding (DUB) is a common reason for women of all ages to consult their gynecologist and is one of the most common debilitating menstrual problems ending up in hysterectomy in developing countries. Abnormal uterine bleeding is one of the most common and challenging problems presenting as an enigma to the gynecologist regardless of the age of the women. Histopathological evaluation of endometrium plays a significant and pivotal role in the diagnosis and management of endometrial causes of Abnormal Uterine Bleeding. The main aim was to study the frequency of different histopathological patterns of endometrium in patients with abnormal uterine bleeding across different age groups, know the endometrial causes of abnormal uterine bleeding and its managements. Methods: The study was conducted in Government Medical College, SSG Hospital, Vadodara over a period of 01 year. This was a retrospective study done on 70 patients presenting with dysfunctional uterine bleeding who underwent endometrial sampling in our hospital. The pattern of endometrial changes were studied and classified. Results: Age of the patients in our study ranged from <20 years to 68 years with maximum in the age group of 40-50 years. Most of the patients were multipara. The main presenting complaint among our patients was menorrhagia followed by polymenorrhagia, menometrorrhagia, continuous vaginal bleeding, Polymenorrhea, postmenopausal bleeding and metrorrhagia. The commonest histopathological pattern in abnormal uterine bleeding was normal physiological phases of menstrual cycle - proliferative and secretory endometrium. Endometrial hyperplasia was the most common endometrial pathology observed. Evaluation of the endometrium revealed various histopathological patterns like proliferative endometrium, secretory endometrium, disordered proliferative endometrium, pill endometrium, shedding endometrium, simple hyperplasia, complex hyperplasia, atrophic endometrium etc. Conclusions: Histopathological examination of the endometrium showed a wide spectrum of pathological changes ranging from normal endometrium to malignancy thus emphasizing the importance of endometrial sampling as an important diagnostic tool in the management of abnormal uterine bleeding. Accurate analysis of endometrial samplings is the key to effective therapy and optimal outcome.*

Keywords: Dysfunctional uterine bleeding, Dilatation and curettage, Endometrium, Histopathology

1. Introduction

Dysfunctional uterine bleeding is defined as abnormal bleeding from the uterus in absence of organic disease of the genital tract. It implies disturbance in the menstrual cycle, regular or irregular and alteration in the amount or duration of menstrual loss.

It is commonly accepted that 80ml per cycle is the upper limit of normal menstrual blood loss. Menorrhagia has multiple causes including systemic disorders like Hypothyroidism & chronic liver failure, clotting dysfunctions like Thrombocytopenia and congenital deficiencies, uterine causes include Fibroids, endometriosis, polyp, endometrial carcinoma and PID. There are also iatrogenic causes like IUCD, progesterone oral or depot injections and anticoagulants like Warfarin. Primary menorrhagia also known as DUB is diagnosed following exclusive of the earlier referred abnormalities.

DUB occurs due to endocrine imbalances but can do occur in normal menstrual cycle which is termed as Ovulatory DUB. Assessment of complaints of excessive blood loss comprises essentially of a detailed and careful history with investigations to rule out systemic or local pathology.

The treatment of DUB has moved into the field of minimally invasive surgery only in non responders to the drug therapy. The medical treatment of DUB comprises of giving progesterone supplements like Norethisterone and NSAIDS

like Mefenamic acid, naproxen, ibuprofen. These group of drugs are well tolerated and indicated especially in the presence of dysmenorrhea. Combined OCP's have been used with fair amount of efficacy but the disadvantage of these group of drugs are the restriction of its use in older women who smokes and among those having risk factors for either thrombosis or heart attack and malignancy.

2. Aims & Objectives

To study and correlate between clinical presentations and histopathological features of DUB.

3. Material & Methods

This study is a retrospective cohort study of 70 admitted cases of DUB who were managed at department of Obstetrics & Gynecology at SSG Hospital, Vadodara from 01/10/2006 to 30/09/2007. All data were collected in a pre-designed form. Data regarding demographic parameters, booking status, socioeconomic status, parity, symptoms, different treatment options and histopathological findings were recorded. All data were analyzed by using computer based statistical package for social science (SPSS 16) programme. Statistical analysis was performed, categorical variables was performed in the form of frequency and percentage.

4. Results

Total 70 cases of DUB were retrospectively studied who were admitted during period from 01/10/2006 to 30/09/2007. This study was conducted at SSG Hospital and different etiological factors along with different treatment modalities were studied during my residency at the time of this study.

In present study 60(85.7%) were booked cases who were admitted from OPD and 10(14.3%) were unbooked cases who were admitted from emergency room and were managed subsequently.

Below is the table showing distribution of cases according to their age and residential status.

Table 1: Distribution according to Age & Residence

Variables	Category	No. of Cases	Percentage
AGE (in years)	<20	05	7.13
	21-30	03	4.27
	31-40	22	31.2
	41-50	40	57.4
	>51	0	0
RESIDENCE	Rural	50	71.4
	Urban	20	28.6

As per Table 1 most commonly women within 40-50 years of age manifested with DUB among which most of the women were from rural areas. Overall also majority of cases were recorded to be from rural areas. Various authors have also suggested 40-50 years of age to be the common age group for manifesting DUB.

Table 2: Distribution according to Parity

Parity	Cases	Percentage
0	7	10
1	3	4.2
2	20	28.5
3 and Above	40	57.1
Total	70	100

Table 2 clearly demonstrate that dysfunctional uterine bleeding is more common in multiparous women. Above 85% of cases were multipara and only 10% cases were nulliparous. Similar results were found in Kansaria et al study.

Table 3: Distribution as per mode of presentation

Type of abnormal bleeding	Cases	Percentage (%)
Menorrhagia	19	27.14
Prolonged continuous	12	17.14
Irregular profuse	09	12.85
Continuous bleeding p/v preceded by amenorrhoea	13	18.57
Polymenorrhagia	17	24.28
Postmenopausal bleeding	0	0

Table 03 shows that in this study 27% of women presented with menorrhagia and 24.2% of cases presented with polymenorrhagia compared to 37.85% and 22.8% respectively in study of Sadhna Gandhi.

Table 4: Size of the Uterus as judged by Transvaginalsonography and endometrial pattern

Size of uterus	Secretory	Proliferative	Hyperplasia	Atrophic
Normal	20	23	1	-
Bulky	-	-	13	-
Small	-	-	-	-

From the above table 04 it is evident that 13 out of 14 cases of endometrial hyperplasia had bulky uterus and only 01 had normal size uterus. Almost all cases of proliferative and secretory endometrium had normal sized uterus.

Table 5: Distribution as per Hemoglobin in gram%

Hb in gm%	No. of cases	Percentage (%)
2-5 gm%	10	14.2
5.1-7 gm%	02	2.85
7.1-9 gm%	14	20.00
9.1-10 gm%	18	25.71
10.1-13 gm%	26	37.24

Nearly 16% of cases have hemoglobin level below 7gm% and 20% of cases showed hemoglobin level between 7 to 9gm%. Severe anemia was seen in 10 cases, having excessive bleeding per vagina for 6 months to 2 years.

Table 6: Histology of Endometrium in DUB in routine D&C

Diagnosis	No. of cases	Percentage (%)
Normal	43	61.4
Hyperplasia	14	20.1
Irregular ripening	01	1.4
Irregular shedding	01	1.4
Atrophic	00	0
Chronic endometritis	00	0
*Report NA	11	15.7
Total	70	100

DUB occurs in association of wide variety of endometrial histology as shown in table-06. Majority of patients around 60% had normal endometrial histology.

*In this series, in 11 patients histopathological report of endometrium was not available as D&C was not done because of younger age group and hormones were prescribed.

Table 7: Type of bleeding and endometrium

Type of bleeding	Report NA	Proliferative	Secretory	Irreg. ripenings	Irreg. shedding	Hyperplastic
Menorrhagia	06	04	04	01	01	03
Cont. bleeding Per vaginum	02	03	05	-	-	02
Irregular Profuse	01	05	01	-	-	02
Amenorrhoea f/b bleeding per vaginum	02	03	01	-	-	07
Poly menorrhagia	-	08	09	-	-	-
Total	11	23	20	01	01	14

Table 07 shows correlation between endometrial pattern and type of bleeding. From above it can be concluded that there is no constant relationship between the type of endometrium

and type of bleeding. Thus any type of bleeding can occur from any type of endometrium.

Table 8: Different treatment options

Treatment options	No. of cases	Cured cases	Cure rate(%)
Dilatation & curettage	32	21	65.6
Abd. Hysterectomy	29	-	-
Vaginal Hysterectomy	07	-	-
Hysterectomy with salpingo-oophorectomy	02	-	-
Hormonal treatment	11	11	100

Management of DUB is aimed at to arrest the bleeding immediately and the second objective is to prevent the recurrence of the bleeding and to establish normal cyclic rhythm of menstruation. The amount of blood loss, the duration and frequency of the episodes of bleeding, type of the abnormality, the age of the patient and the desirability of preserving the child bearing or menstrual function are all important factors in the choice of the therapeutic modality. The treatment of DUB is both medical and surgical.

In present study, medical treatment includes the use of the hormones and hematinics and in surgical treatment, dilatation and curettage and hysterectomy with or without salpingo-oophorectomy and diet was always advised to them.

As per table 8, 37.1% was the cure rate recorded in nonhyperplastic functional bleeding after D&C at first occurrence, while 28.1% of patients were cured after first curettage in patients with simple hyperplasia.

5. Discussion

This study consists of analysis of 50 cases of DUB which were managed at tertiary care hospital, SSG Hospital Vadodara from 01/10/2006 to 30/09/2007. Majority of women with DUB were between 40-50 years of age in this study. Previous report by Sutherland et al showed the same results but in a study done by Joshi and Deshpande majority of women with DUB were between 21-30 years of age.

In present study majority of women around 78% were from lower and middle middle socioeconomic class and only 21% were from upper class family. Similar picture is seen in Mitrastudy(1996). This was because patient coming in Government Hospitals are from middle and lower socioeconomic class. If data would have been collected from private hospital picture might get reversed.

As per this study DUB found to be more common in multiparous women. Similar results were also found in Joshi et al, Kansaria et al, Rybo et al study. Davey D.A(1995) also mentioned, women with essential menorrhagia tend to have had a greater number of pregnancy than women with normal menstruation.

This study revealed menorrhagia and polymenorrhagia to be the common presenting complaints of the patient while DUB can present with complaints like polymenorrhea, dysmenorrhea, metrorrhagia, postmenopausal bleeding.

The treatment of DUB can be both medical and surgical. Majority of patient get cured with simple surgical management like dilatation and curettage giving a cure rate of 65.6%. Hysterectomy was performed in 38 cases, 11 of which had already undergone curettage operation once. Thus in 61.2% of cases the management of DUB is conservative like curettage and hormones.

It is difficult at this stage to decide whether anemia is a cause or effect of excessive blood loss. Perhaps, the study of serum iron level in all these cases would have thrown much more light on the causation of menorrhagia because in chronic iron deficiency there may be lowering of serum iron level but relatively normal hemoglobin level.

The actual causes of bleeding remains still a mystery after all such investigations. Findings of hemoglobin above 7gm% in majority of cases in spite of longer duration menorrhagia, does not favour the view point suggested by Tymor et al that iron deficiency may be the cause of dysfunctional uterine bleeding.

Studies of Sutherland (1949) and Kistener (1964) have shown that approximately 60% of patients have normal endometrium though upto 30% may have endometrial hyperplasia. Similar were the findings of the present study.

As per the present study no constant relationship between type of bleeding and type of endometrium was noted. Thus any type of bleeding can occur from any type of endometrium.

Follow-Up and Long Term Care

After treatment is initiated patient should be seen at regular intervals to ensure that their bleeding profile has improved to their satisfaction. Most experts recommend continuing hormonal therapy for atleast 6 months. After therapy is discontinued the patient should still be followed to ensure regulation of menstruation.

6. Conclusion

Dysfunctional uterine bleeding now commonly known as Abnormal uterine bleeding commonly present with the complaint of Menorrhagia. Histopathological examination of the endometrium showed a wide spectrum of pathological changes ranging from normal histology to malignancy thus necessitating endometrial sampling as an important diagnostic tool in the diagnosis and management of abnormal uterine bleeding also known as DUB earlier. Accurate analysis of endometrial sampling is the key to effective therapy and optimal outcome. This would help in individualizing the management of dysfunctional uterine bleeding with a view to preserve the uterus.

References

- [1] Yusuf NW, Nadeem R, Yusuf AW. Dysfunctional uterine bleeding. A retrospective clinicopathological study over 2 years. Pak J Obstet Gynecol. 1996;9:27-30.
- [2] Muzaffar M, Akhtar KAK, Yasmin S, Mahmood-UrRehman, Iqbal W, Khan MA. Menstrual irregularities

- with excessive blood loss: a clinicopathologic correlation. *J Pak Med Assoc.* 2005;55:486-9.
- [3] Anwer M, Imdad SK, Jamal Q. Histopathological correlation of endometrial curettage with abnormal uterine bleeding pattern. *J Surg Pak* 2004;9(2):21-4. 16. Mogal N. Diagnostic value of endometrial curettage in abnormal uterine bleeding-a histopathological study. *J Pak Med Assoc.* 1997;47(12):295-9.
- [4] Brenner PF. Differential diagnosis of AUB. *Am J Obstet Gynecol.* 1996;175:766-9.
- [5] Albers JR, Hull SK, Wesley RM. Abnormal uterine bleeding. *Am Fam Phys.* 2004;69:1915-26.
- [6] Litta P, Merlin F, Saccardi C, Pozzan C, Sacco G, Fracas M. Role of hysteroscopy with endometrial biopsy to rule out endometrial cancer in postmenopausal women with abnormal uterine bleeding. *Marturitas.* 2005;50(2):117-23.
- [7] Hallenberg L, Hogdahl A. Menstrual blood loss- a population study. *ActaObstelGynecolScand* 1996;45,320-351.
- [8] Breazely J.M. Dysfunctional uterine haemorrhage *Br.J.Hosp.Med.* 1972;07:573.
- [9] Davey D.A.(1995): Dysfunctional uterine bleeding in Dewhurst's textbook of obstetrics and gynecology for post graduate. 5th edition.Charles R.Whitefield(Ed) Blackwell science PP 157-163.
- [10] Sutherland AM(1949): Functional uterine haemorrhage. A critical review of literature since 1938 *Glassgow Med. J.*30: PP 1-28.