

Different Types of Clinical Presentation and Management of Dysfunctional Uterine Bleeding

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Abstract:

Dysfunctional uterine bleeding (DUB) is an important gynecological problem which embarrasses the patients causing anxiety and fatigue. It is an important cause of iron deficiency anemia and also causes significant number of absence from workplace. In this study we attempted (i) to explore different clinical presentation of DUB patients, (ii) to investigate histopathological conditions and (iii) to see the effectiveness of different modalities of treatment of DUB in our country. This prospective study carried out for a period of one year from July, 2015 to June, 2016 in two tertiary care hospitals. Total 50 cases were studied. Mean age was 40.25 years and the predominant age group was 47-50 yrs of age. 25(50%) patients had their menstrual symptoms for 1-3 years. Menorrhagia is the predominant (56%) bleeding pattern and 98% patients were anemic. Ultrasonography detected 29(58%) cases of bulky uterus and hyperplasia in 16(32%) cases. Histopathological examination reveals proliferative phase in 27.77% patients and atrophic endometrium in 25% cases. Regarding treatment, total 14 patients were given medical treatment and of them 55 percent remained symptom-free. Thirty six (72%) patients had hysterectomy. Among them 16(44.45%) had direct hysterectomy and the rest 20(55.55%) had either prior medical treatment or curettage or both followed by hysterectomy. There were wide varieties treatment modalities for DUB patients. Management needs to be individualized for each patients. We found that a large number of patients (55.55%) underwent hysterectomy in comparison to other studies.

Key-Word: Dysfunctional Uterine Bleeding, Iron Deficiency Anemia, Functional haemorrhage, Endometrium

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Introduction:

Dysfunctional uterine bleeding (DUB) is one of the most common global Gynecological problem which affects about 10% of outdoor patients in gynecology department presented with uterine bleeding¹. It affects women of all races and class and although predominantly occurs in the extremes of menstrual life (Post menarcheal and premenopausal) but may

occur at any age². Dysfunctional uterine hemorrhage is a diagnosis of exclusion. It is an abnormal bleeding of endometrial origin without any causative factor e.g. pregnancy, infection, neoplasm or systemic disorders such as blood dyscrasias or exogenous hormone administration. It is often referred to as “Functional hemorrhage” and by some authors termed it as “Dysfunctional hemorrhage”.

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Later one is justified because nearly all the systemic causes probably act by upsetting endocrine function^{3,4}. DUB is characterized by an imbalance between adenohipophysis and ovary. In adolescent girls, abnormal uterine bleeding is due to immaturity of the hypothalamo-pituitary-ovarian axis. When a girl enters into puberty, gonadotrophin level increases, leading to development of ovarian follicles that produces estrogen. As a result endometrial lining becomes thickened and vascular. In some patients, the friable endometrium may breakdown intermittently, causing irregular spotting. In perimenopausal women, as the ovary ages, it becomes less sensitive to FSH and LH. Estrogen level falls despite normal to elevated level of gonadotrophins that result in heavy and prolonged bleeding.

Ovular type of bleeding is typical in adult reproductive years, where cyclical bleeding may occur with excessive in amount and duration and pre and post menstrual bleeding may be seen. Anovular type of bleeding is seen in 10% of reproductive age group women. Dysfunctional uterine bleeding be suspected by the history and supported by the pelvic examination, confirmed by endometrial biopsy.

Materials and Methods:

This prospective study was carried out in the Shaheed Suhrawardi Medical College and Hospital, Dhaka and Shaheed Tajuddin Ahmed Medical College and hospital, Gazipur during a period of 12 months from July 2015 to June 2016. The study population comprises 50 patients who attended the hospitals with the primary diagnosis of dysfunctional uterine bleeding (DUB). The Diagnosis of DUB was made on the basis of history, lack of any pelvic pathology to account for the bleeding and endometrial curettage when needed and

possible. Exclusion criteria were organic pathologic conditions.

To see the effect of medical treatment and curettage, patients were routinely advised to come for follow up at 1, 2, 3 and 6 months after the starting of treatment. Data of each patient was recorded systematically and then analyzed statistically. After a careful history taking, clinical examination was done on each patient thoroughly and bleeding was ascertained in relevant case.

Per-vaginal examination was carried out systematically. During per speculum examination, condition of the wall, fornices, cervix including its external os were all examined.

After Clinical examination, the patient was investigated as follows:

1. Diagnostic curettage, materials were collected and examined histopathologically.
2. Ultrasonography.
3. Operation note with operative finding.
 - Gross appearance of specimen removed
 - size of uterus
 - Length of cavity
 - Thickness of myometrium
 - Condition of cervix.
 - Condition of fallopian tubes, ovaries
4. Histopathology of the removed specimen.

Results:

Table-1 shows profile of 50 patients who preliminarily diagnosed as DUB on the basis of history and clinical examination. Age ranged from 16 to 55 years, mostly (54%) come from average socio-economic condition. 03 were unmarried and out of 47 married patients 45 were fertile and most of them were multiparous. Number of parity in 20(44.4%) patients is five (Table-2).

Table-1: Patients Profile (n- 50)

| | No. of Patients | Percentage |
|--|-----------------|------------|
| Age group (years) (n=50) | | |
| 16-20 | 1 | 2 |
| 21-30 | 3 | 6 |
| 31-40 | 12 | 24 |
| 41-50 | 32 | 64 |
| >50 | 2 | 4 |
| Socio-economic condition | | |
| Good (Taka >10,000) | 9 | 18 |
| Average (Taka 5000-10000) | 27 | 54 |
| Poor (Taka <5000) | 14 | 28 |
| Marital status (n=50) | | |
| Married | 47 | 94 |
| Unmarried | 3 | 6 |
| Fertility status (n=47) | | |
| Fertile | 45 | 95.74 |
| Infertile | 2 | 4.26 |
| Duration of menstrual cycle(n=50) | | |
| <20 days | 19 | 38 |
| 25-30 days | 28 | 56 |
| Irregular | 03 | 06 |
| Duration of menstrual bleeding period(n=50) | | |
| 4-7 days | 11 | 22 |
| 8-10 days | 27 | 54 |
| 11-15 days | 12 | 24 |

Among DUB patients 50% had duration of symptoms for 1 to 3 years. 12% suffered for 4 to 6 years (Table-3). Period in between tubectomy and symptoms appeared in DUB patients are shown in (Table-4)

Table-2: Number of pregnancies in DUB patients. (n=45)

| Number of Pregnancies | Number of patient | Percentage |
|-----------------------|-------------------|------------|
| 01 | 01 | 2.22 |
| 02 | 01 | 2.12 |
| 03 | 11 | 24.44 |
| 04 | 12 | 26.66 |
| 05 | 20 | 44.44 |

Table-3: Showing duration of symptoms in DUB patients (n-50)

| Total duration of symptoms in DUB | No. of patients | Percentage |
|-----------------------------------|-----------------|------------|
| < 1 year | 19 | 38 |
| 1-3 years | 25 | 50 |
| 4-6 years | 06 | 12 |

Table-4: Showing duration of appearance of symptoms after tubectomy in DUB patients (n-9)

| Duration between tubectomy and symptoms (years) | No. of patients | Percentage |
|---|-----------------|------------|
| 0-5 | 01 | 11.11 |
| 6-10 | 05 | 55.55 |
| 11-15 | 02 | 22.22 |
| 16-20 | 01 | 11.11 |

Menorrhagia is common bleeding pattern found among 28(56%) patients of 35 to 50 years age range. Polymenorrhagia found in 24% and Polymenorrhoea in 16% patients (Table-5). Anaemia followed by Diabetes Mellitus and Obesity are found frequently associated with DUB (Table-6).

Table-5: Showing bleeding patterns with patients' age range distribution.

| Bleeding pattern | Age group | Patients No. (%) |
|---|-----------|------------------|
| Menorrhagia | 35-50 | 28(56) |
| Polymenorrhoea | 40-45 | 8(16) |
| Polymenorrhagia | 28-55 | 12(24) |
| Sudden two bouts of bleeding in Post menopausal women | 52 | 2(04) |

Table-6: Showing association of DUB with other medical condition

| Associated Diseases | No. of patients | Percentage |
|-------------------------------------|-----------------|------------|
| Anemia | 49 | 98 |
| Hypertension | 4 | 08 |
| Diabetes Mellitus | 12 | 24 |
| Hypertension with Diabetes Mellitus | 05 | 10 |
| Obesity | 10 | 20 |
| Hypothyroidism | 1 | 02 |

Findings of bimanual examination, USG and histopathology have shown in table 7, 8 and 9. 29 (72.5%) patients had bulky uterus.

Regarding treating patients 36 (72%) had done hysterectomy as either direct or indirect approach (Table-10). Progesterone and combined pill showed dramatic and satisfactory responses in 60% cases (Table-11).

Immediate result of curettage was found good in 70% patients, but late results were poor in 60% cases (Table-12).

Table -7: Showing results of bimanual examination in DUB

| Bimanual examination | | No. of patients | Percentage |
|----------------------|--------------|-----------------|------------|
| Size of uterus | Normal | 16 | 32 |
| | 6-8 weeks | 29 | 58 |
| | 9-12 weeks | 05 | 10 |
| Position of uterus | Anteverted | 40 | 80 |
| | Retroverted | 10 | 20 |
| Adnexa | Palpable | 03 | 06 |
| | Not palpable | 47 | 94 |

Table-8: Results of Ultrasonic findings in DUB patients

| Ultrasonic findings | | No. of patients | % |
|---------------------|-------------|-----------------|----|
| Size of uterus | Normal | 21 | 42 |
| | Bulky | 29 | 58 |
| Endometrium | Hyperplasia | 16 | 32 |
| | Atrophic | 08 | 16 |
| | Normal | 26 | 52 |
| Ovary | Cystic | 08 | 16 |
| | Normal | 42 | 84 |

Table-9:Histo-pathological findings of endometrium of DUB patient (n=36)

| Histopathological findings of endometrium | No. of patients | Percentage |
|---|-----------------|------------|
| Proliferative phase | 10 | 27.8 |
| Secretary phase | 5 | 13.9 |
| Atrophic endometrium | 9 | 25.0 |
| Mixed endometrium | 3 | 8.3 |
| Cystic hyperplasia | 7 | 19.4 |
| Atypical hyperplasia | 2 | 5.6 |

Table- 10: Mode of treatment in DUB patients

| Mode of treatment | No. of patients | Percentage |
|--|-----------------|------------|
| Medical | | |
| Synthetic progesterone | 10 | 55.5 |
| Combined oral contraceptive | 5 | 27.8 |
| Tranexamic acid | 3 | 16.7 |
| Total no. of patients | 18 | 100 |
| Surgical | | |
| Medical treatment / Curettage followed by Hysterectomy | 20 | 55.6 |
| Direct Hysterectomy | 16 | 44.4 |
| Total no. of patients | 36 | 100 |

Table- 11: Response to hormonal therapy

| Therapy result | No. of patients | Percentage |
|--------------------------|-----------------|------------|
| Progesterone | | |
| Dramatic response | 6 | 60 |
| Moderate response | 2 | 20 |
| Poor response | 2 | 20 |
| Combined pill | | |
| Responded satisfactorily | 3 | 60 |
| Not satisfactorily | 2 | 40 |

Table- 12: Results of antifibrinolytic therapy and of curettage

| Therapy result | No. of patients | Percentage |
|--------------------------------|-----------------|------------|
| Tranexamic acid- Responded | 2 | 66.66 |
| Poor responded | 1 | 33.34 |
| Immediate result of curettage- | | |
| Good | 14 | 70 |
| Poor | 06 | 30 |
| late result of curettage- | | |
| Good | 8 | 40 |
| Poor | 12 | 60 |

Discussion:

DUB is an important cause of compromising quality of life, job disruption and economic loss⁵. Though more prevalent in extremes of reproductive period-adolescence and premenopausal, it is also quite frequent in the middle of reproductive age. Begum⁶ in her study on 80 women in 1981 showed predominant age as 3rd to 4th decade. Banerjee⁷ in a study in 1988 showed predominance age as 41-45 years. Lavin C⁸ showed a predominance in the 3rd decade. In the present series, 32 patients belonged to age group 41-45 years, followed by 12 patients in 31-40 years, and 3 patients belonged to age group 21-30 years. Majority was similar with the study by Banerjee⁷. Apgar BS⁹, Bishop-PMP in their study showed socio-economic condition of DUB patents is in average group. Our study also showed socio-economic condition is average. Jacobs and Lindley¹⁰ showed correlation with pregnancy which was 2.88 pregnancies per patient. In a study by Begum⁶ 62 percent patients had 5 pregnancies and by Banerjee⁷ showed, above 5 pregnancies in 41 percent patients. In the present study, 20 (44.4%) patients having above 5 pregnancies, followed by 4.0 pregnancies in 12 patients which is almost similar to above two studies but higher than a study by Jacob and Lindley Multiparity is more common in the present series. In a study by Begum⁶, 19 patients (24%) came mostly with

menorrhagia within 1-5 years after abdominal sterilization. In the study by Banerjee⁷, 10 patients (20%) complained of menorrhagia within 3-6 months of operation. In the present series, duration between tubectomy and appearance of symptoms is within 6-10 years.

DUB patients may come with different types of menstrual disorder, such as menorrhagia, polymenorrhagia, polymenorrhoea, metrorrhagia, even intermenstrual bleeding. But most common form is functional polymenorrhoea and polymenorrhagia. Jeffcoat¹¹ showed 45 percent patients with polymenorrhagia and polymenorrhoea. Begum⁶ showed 78 percent menorrhagia, 12.5 percent polymenorrhoeae and polymenorrhagia, 8.75 percent continuous bleeding and 1-2 percent had menorrhagia, 30 percent polymenorrhoea and 14 percent continuous bleeding. In the present series, 56 percent suffered from menorrhagia which is closer to Banerjee⁷ study, 40 percent had either polymenorrhagia (24%) or polymenorrhoea (16%) that is more or less similar to Jeffcott.

In the present study, 98 percent were anaemic of varying degree and eighteen percent patients were hypertensive, 20 percent obese, 34 percent diabetic and 2 percent hypothyroidism. All are lower as compare to other studies, except the diabetic patients which is more in other study.

There is variable degree of myohyperplasia with symmetrically enlargement of uterus to a size of about 8-10 weeks due to simultaneous hypertrophy of muscles. Cystic changes may be observed involving one or both ovaries. It may be single or multiple. On bimanual examination, a study by Begum⁶ showed that uterus of 45 percent women were normal size, 46 percent were 6-8 weeks size 9 percent were 9-10 weeks size and palpable adnexa were 16 percent.

Percentage is a little different from each other as bimanual examination may differ from person to person.

Dadsone¹² in his study of 45 cases found that 9 percent women had Polycystic Ovarian Disease (PCOD). Goldstein¹³ et al in their study showed that 58 percent patients had focal polypoid mass, all of which

were removed and confirmed histopathologically and 22 patients (5%) had submucous fibroid and 10 patients had thickened endometrium. In the present series, endometrial thickening was present in 07 patients (19.44%) which varies from reference study possibly due to different route of USG, such as transabdominal and transvaginal. In this study USG was done mainly by transabdominal route.

. Endometrial Biopsy in DUB patients expose the uterus and are done often¹⁴. In a study by Begum⁶, histopathological report of endometrium were 47.44 percent proliferative, 35 percent secretory phase, 12.82 percent cystic hyperplasia, 24 percent atrophic and 1-2 percent mixed type. In a study by Banerjee⁷ 22 percent were proliferative, 16.66 percent secretory, atrophic 44 percent and mixed 2-3percent. In the present series out of 36 reports 25% were atrophic, 27.77% proliferative, 7(19.44%) cystic hyperplasia, 13.88% secretory endometrium and 8.33% mixed endometrium. Atrophic change is similar to begum's⁶ study and proliferative change is similar to Banerjee's⁷ study.

In a study by Begum⁶, 26 patients were treated by synthetic progesterone. Dose schedule was 30 mg for 1 week then 20 mg for 1 week and then 10 mg for 1 week. Then the drug was discontinued. Usually bleeding stops in 3-7 days and withdrawal bleeding occurs 2-4 days later.

In the present series, 10 patients were advised to take systemic progesterone. The dose schedule was 30 mg for 21 days. 6 patients had controlled cycle after 3-6 months of regimen 2 patients had controlled bleeding when taking the drugs but started to bleed when the drug was discontinued. Two patients responded poorly Last 4 patients were in ovular type bleeding. Progesterone acts better in anovular bleeding. In a study by Begum⁶, 11 patients were treated by low dose oral pill. Cyclical bleeding was seen later and failure found in three patients. By Banerjee⁷ eight patients treated by oral contraceptive pill (OCP) for 3-6 months and success rate in that cases were

100 percent. In this series, 5 patients were advised for OCP and their bleeding was under control. Three patients were symptoms free for 3-6 months but in 2 patients response was not satisfactory. Milsum, Bonner and Shephard^{15,16} treated 75 cases with tranexamic acid of which 75 percent showed controlled bleeding. Here three patients who were under 30 years of age were treated with tranexamic acid. Among them 2 patients responded well.

A study of 28 patients by Begum⁶ showed that 19(53.5%) patients remain symptom free for 3-6 months and remaining 8(45.5%) patients had no menorrhagia. Banerjee⁷ showed good result in 34(64%) and poor response in 16 patients (32%). In this series 11 patients (55%) out of 20 were symptom free for 3-6 months with medical management.

45 patients who were in the age group of 36-45 years were treated by medical and surgical treatment. 30 patients (77.7%) had control of bleeding for 3-6 months .Five did not come for follow up. So combined treatment gives a better result.

In a study by Begum⁶ 40 patients out of 50 underwent hysterectomy who had previous curettage but showed no improvement, 10 patients had direct hysterectomy and all of their families were complete. Banerjee in his study showed 33 out of 50 patients (66%) underwent hysterectomy and 21 patients were 40-45 years of age and 10 were above 45 years. In the present series 36 patients (72%) out of 50 had hysterectomy among them 16 (44.45%) had direct hysterectomy after failure of medical and surgical treatment. These patients were in the age group of 41-50 years. 04 were above 50 years and 08 were 31-40 years.

Conclusion:

We found that a large number of patients underwent hysterectomy. Hysterectomy is justified when conservative treatment fails and blood loss impair the health of the patients. Presence of endometrial hyperplasia is an indication of hysterectomy,

the decision can be easily taken as the patient approaches 45 years.

Our study revealed that patients had less compliance towards conservative management. After conservative management some patient may spontaneously cured. Patients took hormone irregularly, so it was difficult to reach a conclusion whether irregular taking of drugs is responsible for irregular bleeding or it is due to treatment failure. Patients did not want to come follow up at appropriate time.

Treatment of menorrhagia aims to improve the quality of life in women who are unable to cope with their excessive menstrual bleeding. There are a number of medical therapies now available from which the physicians can choose. Data demonstrated that some are more effective than others, but may not be applicable for certain individuals. Therefore management needs to be individualized for each patient. Unfortunately as yet no long term cure for dysfunctional uterine bleeding presenting as menorrhagia is available, thus for many patients surgery may ultimately become necessary. Effective medical treatment can defer these interventions in many patients for a long period of time and appropriate control with medical treatment will remove the need for surgery at all in many individuals.

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