INTRODUCTION

DUB is one of the most frequently encountered condition in gynaecology and defined as abnormal bleeding from the uterus in absence of organic disease of genital tract and demonstrable extragenital cause.¹

Schroeder in 1914 first described the term dysfunctional uterine bleeding. The underlying cause of DUB is still uncertain, but in most cases, it is associated with failure of ovulation and is a consequent of hormonal imbalance.

In gynec 20% women present with abnormal uterine bleeding.² The underlying cause of DUB is still uncertain, but in most cases, it is associated with failure of ovulation and is a consequent hormonal imbalance. Ovarian dysfunction may be caused by either a primary defect or pathologic lesion within the ovary itself or it may be secondary to malfunction of another endocrine glands, notably the hypothalamus, pituitary and thyroid.³

DUB Affects 20-30% of women and accounts for 12% of gynaecology related complaints disturbances of thyroid function have long been linked to abnormal menstrual and were first described in 1840 by von Brandon.⁴,⁵

A relationship between the thyroid gland and the gonads is suggested by the far more frequent occurrence of thyroid disorders in women than in men and by the common appearance of goiter during puberty, pregnancy and the menopause.⁶ Thyroid disorders are ten times more common in women than in men.⁷
Accordin to aetiology DUB is classified as

- Primary: Pathology in endometrium or hypothalamo-pituitary-ovarian-endometrial-axis (ovulatory and anovulatory).
- Secondary: cause detected outside the hypothalamo-pituitary-ovarian-endometrial axis (endocrinopathies, hematological, vascular disease and liver disorders).
- Iatrogenic: caused by drugs, irregular hormone intake and/or IUCD.
- Thyroid dysfunction is a cause of nonstructural AUB. Thyroid is closely linked with the process of ovarian maturation.

Menorrhagia being the chief symptom in hypothyroidism, its treatment with thyroxine has been demonstrated by Menon. Some encouraging results have been shown by Doifode and Fernandes, so avoiding unnecessary hormones and surgery. Thyrotoxicosis on the other hand manifests chiefly with hypomenorrhoea.

The International Federation of Gynaecology and Obstetrics in November 2010, accepted a new classification system for causes of AUB in the reproductive years. The system based on the acronym PALM COEIN (polyps, adenomyosis, leiomyoma, malignancy and hyperplasia-coagulopathy, ovulatory disorders, endometrial causes, iatrogenic, not classified) was developed in response to concerns about the design and interpretation of basic science and clinical investigation that relates to the problem of AUB.

**METHODS**

The present study was conducted in Department of Obstetrics and Gynaecology SCB Medical College and Hospital.104 women attending the OPD/IPD who were clinically given the diagnosis of dysfunctional uterine bleeding during the period from January 2015-August 2016 were selected for the study after permission from ethical committee.

After informed consent detailed history of all patients was taken including the menstrual history.

**Inclusion criteria**

- Premenopausal women with excessive regular bleeding
- Pubertymenorrhagia
- No organic disease of genital tract
- No IUCD

**Exclusion criteria**

- Patient suffering from organic diseases of genital tract
- Known case of hypothyrodisim
- Using steroidal hormones and IUCD.

Data obtained from the study was statistically analysed to derive significance and co-relation.

**RESULTS**

In the present study the following tables give a descriptive analysis of the age distribution, the parity distribution, symptomatic distribution of DUB and its association with thyroid dysfunction.

**Table 1: Distribution of patients according to age.**

| Age group in years | No. of cases | Percentage |
|--------------------|--------------|------------|
| ≤20                | 13           | 12.5       |
| 21-30              | 14           | 13.46      |
| 31-40              | 32           | 30.77      |
| 41-50              | 45           | 43.27      |
| Total              | 104          | 100        |

The maximum no of patients in the study group belongs to the age group of 41-50 years i.e. 43.27%, between 31-40 years 30.77% cases were seen (Table 1).
Table 2: Distribution of cases according to parity.

| Parity     | No. of cases | Percentage |
|------------|--------------|------------|
| Unmarried  | 17           | 16.3       |
| 0          | 8            | 7.8        |
| 1          | 13           | 12.5       |
| 2          | 34           | 32.7       |
| 3          | 23           | 22.1       |
| 4          | 6            | 5.7        |
| 5          | 3            | 2.9        |
| Total      | 104          | 100        |

In the study of 104 patients who came with complaints of different bleeding pattern which was grouped in table 3, the commonest was menorrhagia 40.38%. Among others 25.96% presented with polymenorrhagia, 19.23% with acyclical bleeding, 3.85% had oligomenorrhoea, maximum patients were seen with complaints of menorrhagia followed by polymenorrhagia (Table 3).

Table 3: Distribution of patients according to bleeding pattern.

| Type of bleeding | No. of cases | Percentage |
|------------------|--------------|------------|
| Acyclical        | 20           | 19.23      |
| Hypomenorrhoea   | 01           | 0.96       |
| Menorrhagia      | 42           | 40.38      |
| Metrorrhagia     | 05           | 4.81       |
| Oligomenorrhoea  | 04           | 3.85       |
| Polymenorrhagia  | 27           | 25.96      |
| Polymenorrhoea   | 05           | 4.81       |
| Total            | 104          | 100        |

Table 4: Distribution of patients according to thyroid function.

| Thyroid status      | No. of cases | Percentage |
|---------------------|--------------|------------|
| Euthyroid           | 75           | 72.1       |
| Hypothyroid         | 16           | 15.3       |
| Sub clinical hypothyroid | 10 | 9.6       |
| Hyperthyroid        | 3            | 2.8        |
| Total               | 104          | 100        |

Thyroid dysfunction which was list common in patients presenting with acyclical bleeding, polymenorrhagia and polymenorrhoea i.e. 3.4% and absent in those with hypomenorrhoea.

Hyperthyroid patients presented exclusively with oligomenorrhoea. Thyroid dysfunction was most prevalent in patients presenting with menorrhagia (72.4%) followed by oligomenorrhoea (10.3%) (Table 5).

Subclinical hypothyroid and hypothyroid patients had menorrhagia as their commonest bleeding pattern. In the present study in table-5 hypothyroid cases having menorrhagia no 15 (93.75%) and whereas hypothyroid with metrorrhagia 1(6.25%) (Table 5).

Table 5: Bleeding pattern in euthyroid and patients with thyroid dysfunction.

| Type of bleeding | Euthyroid N=75 | Hypothyroid N=16 | Sub clinical hypothyroid N=10 | Hyperthyroid N=3 | Total thyroid dysfunction N=29 |
|------------------|----------------|------------------|-------------------------------|------------------|------------------------------|
| Acyclical        | 19 (25.3%)     | 0                | 1                             | 0                | 1 (3.4%)                     |
| Hypomenorrhoea   | 1 (1.4%)       | 0                | 0                             | 0                | 0                            |
| Menorrhagia      | 21 (28%)       | 15 (93.75%)      | 6                             | 0                | 21 (72.4%)                   |
| Metrorrhagia     | 3 (4%)         | 1 (6.25%)        | 1                             | 0                | 2 (6.9%)                     |
| Oligomenorrhoea  | 1 (1.4%)       | 0                | 0                             | 3                | 3 (10.3%)                    |
| Polymenorrhagia  | 26 (34.7%)     | 0                | 1                             | 0                | 1 (3.4%)                     |
| Polymenorrhoea   | 4 (5.4%)       | 0                | 1                             | 0                | 1 (3.4%)                     |

DISCUSSION

In present study patients were taken from all age groups which included less than 20 years, 21-30 years, 31-40 years and 41-50 years maximum no of patients 43.27% were found to be in the age group of 41-50 years followed by 31-40 years (30.77%).

It is more common in 4th to 5th decades of life or in perimenopausal age group.12 Das and Chugh et al reported that highest incidence of DUB was seen in 41-50 years (32.5%) of age group and then 31-40 years (28.2%).13 Sangeeta Pahwa et al, observed that majority of patients were in the age group between 31-40 years (42%).14

In present study group most of the patients belongs to para-2 (32.7%) and para-3 (22.1%). Pilli et al also reported that DUB was seen in 87% multipara, 7% primipara and 6% nulliparous women.15
In this study menorrhagia was the commonest bleeding pattern seen in 40.38% cases followed by polymenorrhagia in 25.96% of the cases. Mehrotia et al. found an incidence of 54.2% of menorrhagia in their study.10 According to Talukdar et al, the dominant menstrual problem in patient with AUB was menorrhagia in 44.44%.12

In the present study euthyroidism was seen in 72.1% and hypothyroidism was seen in 15.3%. 9.6% of cases had subclinical hypothyroidism and 2.8% patients had hyperthyroidism though they were clinically normal. In Sharma N et al study 64% patients were euthyroid, 22% hypothyroid and 14% hyperthyroid.9

Kaur et al observed in their study that 85% of patients with AUB was euthyroid, 14% hypothyroid and 1% hyperthyroid.17 According to Sowers et al 90.4% were euthyroid, 6.2% hypothyroid and 3.2% hyperthyroid in perimenopausal age group.18

In present study Subclinical hypothyroid and hypothyroid patients had menorrhagia as their commonest bleeding pattern. Thyroid dysfunction was most prevalent in patients presenting with menorrhagia (72.4%) followed by oligomenorrhoea (10.3%). In the present study in Table 5 hypothyroid cases having menorrhagia no 15 (93.75%) and whereas hypothyroid with metrorrhagia 1(6.25%).

Doifode et al observed menorrhagia in hypothyroidism was 38 (63.33%) and which was same as present study.11 In hypothyroid patients Menon and Bharucha gave an incidence of 46.15% was menorrhagic.10 According to Wilansky et al in patients of menorrhagia and hypothyroidism menorrhagia disappeared within 3-6 months and did not reappear in 1-3 years of follow up after thyroxine treatment.19

CONCLUSION

Thyroid dysfunction should be considered as an important etiological factor in menstrual disturbances and thyroid function tests must be done in women presenting with DUB; and also in those presenting with fatigue obesity, lethargy in addition to infertility, luteal phase defects, delayed puberty and recurrent abortions. Also, those presenting with thyroid dysfunction must be screened for menstrual disorders. As there is high incidence of thyroid diseases in our area. This would also avoid unnecessary hormonal treatment and surgery in DUB patients.

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