



THE ASSOCIATION OF THYROID DYSFUNCTION WITH DYSFUNCTIONAL UTERINE BLEEDING

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ABSTRACT

INTRODUCTION: The thyroid gland is known to play an important role in maintaining a healthy menstrual cycle. Both hypo and hyperthyroidism are associated with a variety of changes in reproductive function. **OBJECTIVE:** To find out the different patterns of menstrual abnormalities associated with thyroid disorders. **METHODS:** The study group comprised of females attending Obstetrics and Gynaecology Department presenting with abnormal uterine bleeding. **RESULTS:** Among the 30 women, 05 had hypothyroidism, 01 patient had hyperthyroidism rest 24 were euthyroid. And out of 05 hypothyroid patients, 03(60%) had menorrhagia, 01 had oligomenorrhea and 01 patient with hyperthyroidism was found to have Hypomenorrhoea. **CONCLUSIONS:** Thyroid dysfunction should be considered as an important etiological factor for menstrual abnormality. Biochemical estimation of T3, T4, TSH should be made mandatory in dysfunctional uterine bleeding especially in nonstructural causes.

KEYWORDS : Dysfunctional uterine bleeding, Thyroid dysfunction, Menorrhagia

INTRODUCTION:

Menstruation has been regarded as the purifying process of the female health system. So, any change in the volume or pattern of menstrual bleeding is considered as a cause of concern for health in women. Menstrual abnormalities in absence of any organic pelvic pathology forms a group of disorders known as Dysfunctional Uterine Bleeding (DUB) where there is a dysfunction at any level of the hypothalamo-pituitary-ovarian axis resulting in disturbance in the rhythmical production of hormones by the ovary. Novak defined it as - bleeding without a causative uterine lesion such as tumour, infection or complications of pregnancy, although frequently there may be associated cysts of the ovary. It forms a major portion of abnormal menstruation cases, being the principal diagnosis in at least 10% of all new outpatient department patients. The bleeding may be abnormal in frequency, amount or duration. Out of all the aetiologies, age variations and clinical presentations like thyroid dysfunction are becoming significantly important factors associated with DUB. The thyroid gland is known to play an important role in maintaining a healthy menstrual cycle. Both hypo and hyperthyroidism are associated with a variety of changes in reproductive function.

So, manifestations of DUB can range in between both ends of the spectrum. Abnormal menstruation, particularly heavy and prolonged menses are frequent debilitating conditions resulting in the need for repeated curettage and hysterectomy with its attendant morbidity and mortality. Hysterectomy, being a major surgery with its associated significant surgical and psychological complications is quite unacceptable to many women today. To avoid such complications and a major surgery at all, it is better to aim at finding out an etiological factor for these abnormal bleeding patterns and treat it conservatively.

The introduction of serum tri-iodothyronine (T3) and tetra-iodothyronine (T4 or Thyroxine) and serum thyroid stimulating hormone (TSH). Carbonylmetalloimmunoassay (CMIA) has increased the sensitivity and specificity of thyroid function testing. The serum TSH assay has been shown to be a sensitive indicator of diminished thyroid functional reserve, since TSH levels become elevated before circulating serum thyroxine levels fall below the normal range.

So, we have undertaken this study to evaluate the thyroid status in apparently euthyroid patients with DUB coming to our hospital. We also want to find out the correlation of thyroid dysfunction with the incidence of DUB.

AIMS AND OBJECTIVES:

1. To find out the different patterns of menstrual abnormalities associated with thyroid disorders.
2. To determine the type of abnormal uterine bleeding pattern in relation to the different thyroid disorders (hypo and hyperthyroidism).

MATERIALS AND METHODS -

Study Setting: The present study was conducted in the Civil Hospital, Ahmedabad.

Study Design: Hospital based prospective observational study.

Study Period: 1 October 2016 to 31 December 2016

Study Population: The study group comprised of females attending Obstetrics and Gynaecology Department in Civil Hospital, Ahmedabad, presenting with abnormal uterine bleeding.

Inclusion Criteria: All women with DUB from puberty to menopause.

Exclusion Criteria: Patients, who were pregnant, were known to have cervical or uterine malignancy, fibromyoma, polyp, goiter, Carcinoma thyroid or with overt clinical symptom of thyroid dysfunction, any coagulation disorders, liver/renal diseases or were on medications like steroids, neuroleptics, anticoagulants and cytotoxic drugs, etc.

Sample Size: This study consists of analysis of 30 gynaecological cases who have fulfilled the selection criteria. All patients were informed in detail about aim, objectives of study and written consent was taken. A detailed history was obtained with special relevance to age, bleeding pattern-Onset, duration, amount of bleeding. Clinical examination including general physical examination, systemic examination and gynecological examination was carried out with special reference to thyroid dysfunction; in cases with a provisional diagnosis of DUB.

Baseline investigations like Hb, platelet count, TLC, DLC, RBS, S.Creat, BT, CT and PT were done. Thyroid hormones viz. TSH, Total T3 and T4 were estimated by CMIA (Carbonylmetalloimmunoassay).

Statistical analysis of the data was performed by using Microsoft Excel software. Study of relation of thyroid profile with abnormal uterine bleeding was carried out by applying Chi-Square test (χ^2) of significance.

[The reference values used in this study were from the same government medical college laboratory.

(B.J. Medical College and Civil Hospital, Ahmedabad)

Serum levels of TSH: 0.465-4.68 uIU/ml
 Serum levels of T3: 2-1-8.4 pg/ml
 Serum levels of T4: 0.8-2.7ng/dl

RESULTS

Table 1: Distribution Of Patients According To Thyroid Status

S.No	Thyroid status	Number of patients (n=30)	Percentage (%)
1	Euthyroid	24	80%
2	Hypothyroid	05	16.67%
3	Hyperthyroid	01	3.33%

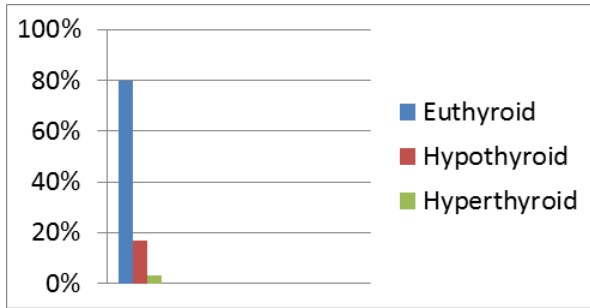


Figure 1: Distribution Of Patients According To Thyroid Status

Table 2: Pattern Of Abnormal Uterine Bleeding In Thyroid Dysfunction

S.No.	Pattern of Bleeding	Hypothyroid (n=05)	Hyperthyroid (n=01)
1	Menorrhagia	03	00
2	Polymenorrhoea	00	00
3	Acyclic	00	00
4	Oligomenorrhoea	01	00
5	Hypomenorrhoea	00	01
6	Metrorrhagia	01	00

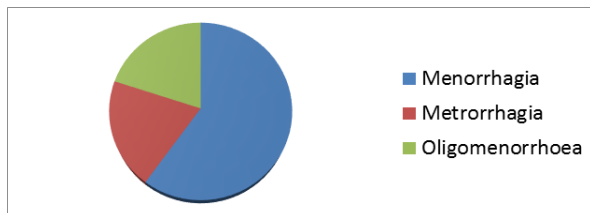


Figure 2: Pattern Of Abnormal Uterine Bleeding In Hypothyroidism

Table 3: Showing Age-wise Distribution Of Dysfunctional Uterine Bleeding (DUB) cases-

Age (in years)	No. Of patients	Percentage (%)
<20	06	20%
21-30	02	6.67%
31-40	10	33.33%
>40	12	40%
Total	30	100

DISCUSSION-

Thyroid disorders are more common in women with menstrual irregularities as compared to general population. Both hypothyroidism and hyperthyroidism may result in menstrual disturbances.

Scot and Mussey observed abnormal menstrual pattern in 56% of myxedematous patients. Menorrhagia and metrorrhagia alone or combined constituted abnormal pattern in 75% of patients.

Wilansky et al showed a prevalence of 22% of early

hypothyroidism by thyrotropin releasing hormone test in menorrhagic women, that is much higher than that found in general female population.

Joschi et al showed 44% of the women with menstrual abnormality were apparently euthyroid. Menstrual irregularity was significantly more frequent in hypothyroidism or hyperthyroidism as compared to euthyroid.

Our study too had apparently euthyroid patients none showing signs and symptoms of thyroid disease but with TSH assay 06 patients were found to have subclinical disease. Menstrual disturbance in thyrotoxicosis is two and half times more frequent than in normal general population.

In the present study, Among 30 women, 05 had hypothyroidism, 01 patient had hyperthyroidism rest 24 were euthyroid. (Table-1), which was similar to study done by Scott and Mussey [8] , Joschi et al. [9] , Kaur T et al[10] & N Bhavani et al[11] ,Phukan JK et al [13].

In our study out of 05 hypothyroid patients, 03(60%) had menorrhagia, 1 had oligomenorrhoea and 1 patient with hyperthyroidism was found to have Hypomenorrhoea (Table-2) which was similar to study done by Scott and Mussey [8] , Kaur T et al[10] & N Bhavani et al[11].

Among 30 women recruited majority belong to the age group above 40 years (40%) (Table-3) followed by 31-40 yrs (33.33%) and 20% were in the age group <20 yrs which was similar to study done by Scott and Mussey [8] , N Bhavani et al[11], Narula et al [14].

Our study showed menstrual irregularities to be significantly more frequent in patient with thyroid dysfunction concluding that systematic study of thyroid function in dysfunctional uterine bleeding is warranted. These studies show that thyroid disorders are more common in patients with dysfunctional uterine bleeding. Both hypothyroidism and hyperthyroidism may result in abnormal uterine bleeding. Thyroid function test should be done in patients presenting with dysfunctional uterine bleeding.

CONCLUSION:

Thyroid dysfunction should be considered as an important etiological factor for menstrual abnormality. Biochemical estimation of T3, T4, TSH should be made mandatory in Dysfunctional Uterine Bleeding especially in non-structural causes and also in those presenting with fatigue, obesity, lethargy in addition to infertility delayed puberty and recurrent abortions. As there is high incidence of thyroid dysfunction in our area, this evaluation of thyroid in abnormal uterine bleeding would also avoid unnecessary surgeries and exposure to hormones.

The menstrual irregularities are significantly more frequent in patients with thyroid dysfunction and menorrhagia was the commonest menstrual abnormality. We suggest the need for Mandatory thyroid screening in all patients with menstrual irregularities as it will definitely help in early diagnosis and treatment of DUB patients.

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