

Study of Thyroid Disorders as a Cause of Abnormal Uterine Bleeding

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Abstract -

Background- Abnormal uterine bleeding is a common complaint of women presenting in out patient department of Obs & Gynae. The objective of this study was to find out thyroid disorders as a cause of AUB.

Methods - This is a non interventional prospective study conducted in the department of Obs & Gynae, Nalanda Medical College, Patna for a period of one year. A total of 100 patients were recruited for this study after considering inclusion and exclusion criteria. A detailed clinical history, thorough clinical examination, routine investigations, ultrasonography and thyroid function tests were done.

Results - In this study maximum number of patients were in the age group of 35-49 years(54%). Maximum number (62%) of patients were of parity 2-4. In this study 81% of the patients were euthyroid where as 17% were hypothyroid (overt and subclinical) and 2% had hyperthyroidism.

Most common presenting symptom was menorrhagia (57.89 %).

Conclusions - Menstrual abnormalities are frequently associated with thyroid disorders. Thyroid function tests should be done in all patients presenting with AUB to avoid unnecessary diagnostic and therapeutic interventions.

Key words: Abnormal Uterine bleeding, Hyperthyroidism, Hypothyroidism

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I. Introduction

Abnormal uterine bleeding (AUB) constitutes symptoms of bleeding per vaginum which is excessive or scanty, prolonged, cyclical, acyclical, unexpected, regardless of diagnosis or etiology. It is a common gynaecological problem and constitutes 20-30% of OPD patients of women 15-50 years of age. The International Federation of Gynaecology and Obstetrics in 2010 accepted a new classification for the causes of AUB. This system is based on acronym - PALM - COEIN.

There are as follows -

1. Structural causes (PALM)

- Polyp
- Adenomyosis
- Leiomyoma
- Malignancy

2. Non structural causes (COEIN)

- Coagulopathy
- Ovulatory disorders
- Endometrial causes
- Iatrogenic
- Non classified

Among all the aetiologies, ovulatory disorders are one of the most common cause of AUB. Thyroid disorders contribute significantly to ovulatory disorders.

Thyroid disorders are the most common endocrine disorders in India. Its prevalence in India is around 26% in women and its incidence increases with age. Both hypothyroidism and hyperthyroidism can result in menstrual irregularities. Association of amenorrhoea with hyperthyroidism has been described as early as 1840 by Von Bosedow. Hypothyroidism even when subclinical can cause menorrhagia. Danse M.D. et al and Douglas L Wilansky et al have also observed that any menstrual irregularity justifies thyroid disorder screening.

Detection of thyroid disorders in patients presenting with AUB and its proper management can prevent unnecessary surgical interventions and improves quality of life.

Thus, thyroid disorders as a cause of abnormal uterine bleeding is evaluated in this present study.

II. Aims And Objectives

1. To determine the prevalence of thyroid disorders in patients presenting with AUB.
2. To determine the different types of menstrual abnormalities associated with various thyroid disorders.

III. Methods

This is a prospective study conducted in the department of Obstetrics & Gynaecology, Nalanda Medical college, Patna for a period of 1 year starting from January 2019 to December 2019. A total of 100 patients were recruited in our study after satisfying all inclusion and exclusion criteria.

Inclusion criteria.-

1. All the Patients from puberty to menopause presenting with AUB in out patient department.
2. Patients with no detectable pelvic pathology.

Exclusion Criteria -

1. Malignancy of genital tract
 2. Active genital tract infection.
 3. Patients with IUCD or on hormone therapy
 4. Pregnancy related causes of bleeding per vaginum or history of child birth in last 1 year or abortion in last 3 months.
 5. Known case of Thyroid disorders.
 6. Women with history of bleeding diathesis and clotting abnormalities.
 7. Severe medical conditions like uncontrolled hypertension, diabetes.
- Detailed history was obtained regarding
- Onset, duration and amount of bleeding
 - Its character and cyclical features
 - Antecedant causes such as IUCD, recent delivery, abortion, hormone therapy
 - Bleeding disorders
 - Medical disorders especially thyroid disorders and diabetes.
 - Menstrual history - Age at menarche, menstrual pattern, history of dysmenorrhoea, premenstrual spotting and menopausal status.
 - Obstetrical history
 - Past medical history.
 - Family history.

A thorough general physical examination was undertaken. A detailed systemic examination of cardiovascular and respiratory system was undertaken. Per adnominal examination was carried out. Gynaecological and pelvic examination was carried out in married women.

Patients were subjected to investigations like CBC, coagulation profile, KFT, LFT, Blood sugar, T3, T4 and TSH, HIV, HBsAg, Anti HCV, R/E of urine was done in all cases. Chest X-Ray PA view and Pap smear was also done. Ultrasonography of abdomen and pelvis was done to rule out structural causes of AUB.

Normal serum concentration taken for standard reference were

- T3 - 0.85-2.02 ng/ml
- T4 - 5.14-14.1 µg/dl
- TSH - 0.27-4.2 µIU/ml

Based on these values, patients were categorized in 4 groups

- Euthyroid
- Overt hypothyroid
- Subclinical hypothyroid
- Hyper thyroid

IV. Results

In the present study, majority of the patients of AUB belonged to the age group of 35-49 years (54%) followed by age group 21-34 years (31%). Least common were patients below 20 years (6%).

Table – I: Distribution of Patients according to age

Age	No. of Patients	Percentage %
< 20 years	6	6
21-34 years	31	31
35-49 years	54	54
> 50 years	9	9

Maximum numbers of patients belonged to parity group of 2-4 (62%) where as least no. of patients were in parity group of > 4 (8%).

Table -II
Distribution of patients according to parity

Parity	No. of patients	Percentage %
Nulli	16	16
P1	14	14
P2-4	62	62
P>4	08	08

Most patients (81%) were in euthyroid group. Hyperthyroidism was present in only 2 cases (2%).

Table-III
Distribution of patients according to Thyroid function test

Thyroid function status	No. of patients	Percentage %
Euthyroid	81	81
Hypothyroid	6	6
Subclinical Hypothyroid	11	11
Hyperthyroid	2	2

Amongst patients with thyroid disorders, menorrhagia was the commonest menstrual irregularity (57.89%) where as hypomenorrhoea and amenorrhoea was least common (5.26% each).

Table-IV
Bleeding pattern in thyroid dysfunction

Pattern of bleeding	Hypothyroid	Subclinical hypothyroid	Hyperthyroid	Total
Menorrhagia	4	6	1	11(57.89%)
Polymenorrhoea	1	1	0	2(10.52%)
Amenorrhoea	0	1	0	1(5.26%)
Metrorrhazia	1	1	0	2(10.52%)
Oligomenorrhoea	0	1	1	2(10.52%)
Hypomenorrhoea	0	1	0	1(5.26%)

V. Discussion

In the present study, majority of the patients (54%) were in the age group of 35-49 years followed by 21-34 years age group (31%). This co-relates with other studies like Narula et al and Dass and Chugh et al.

In the present study, majority of the patients were of parity 2-4 (62%) and nulliparous were 16%. This co-relates with the study of Pilli et al where 87% patients were multiparous and only 7% patients were nulliparous.

Among 19 patients who had thyroid disorders, 17(89.4%) had hypothyroidism (both overt and subclinical) and 2 (10.52%) had hyperthyroidism.

Most common menstrual irregularity found in our study was menorrhagia which was 57.89% which was comparable to studies conducted by Doifode et al 63.3%, Singh et al 44.4 % and Goldsmith et al 50%.

VI. Conclusion

Menstrual irregularities are significantly more common in patients with thyroid disorders. Various types of menstrual disorders can present in thyroid disorders. Assessment of thyroid function should be done in all cases of menstrual disorders. Thyroid function tests are easily available low cost tests which can easily detect a treatable cause of AUB.

Thus, T3, T4 and TSH should be estimated in all cases of patients presenting with AUB. Treatment with Thyroxin in hypothyroid cases and anti-thyroid drugs in hyperthyroid cases can avoid unnecessary surgical intervention and hormonal therapy.

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