



## ABNORMAL UTERINE BLEEDING - SPECTRUM OF BLEEDING PATTERNS IN THYROID DYSFUNCTION

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### ARTICLE INFO

#### Article History:

Received 10<sup>th</sup> March, 2022

Received in revised form 2<sup>nd</sup>

April, 2022

Accepted 26<sup>th</sup> May, 2022

Published online 28<sup>th</sup> June, 2022

#### Keywords:

Abnormal Uterine Bleeding, Thyroid Dysfunction, Uterine Bleeding Patterns.

### ABSTRACT

**Aims and Objectives:** This study was conducted to find the bleeding pattern of abnormal uterine bleeding (AUB) in women of childbearing age and who have thyroid dysfunction.

**Material and Methods:** 300 females of reproductive age group who presented with bleeding abnormalities in the Obs and Gynae OPD were included in the study. These patients were screened for thyroid function and bleeding patterns were recorded.

**Results:** 24% patients (72 out of 300) of AUB had thyroid dysfunction. Menorrhagia was the most common bleeding disorder in this group.

**Conclusion:** Thyroid dysfunction in females of childbearing age can lead to AUB with various bleeding patterns. These bleeding patterns can be a hint about underlying thyroid disease and can be treated by treating the hormonal imbalance.

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### INTRODUCTION

15 – 20% of women suffer from Abnormal uterine bleeding (AUB) from menarche to menopause. [1]. AUB can be a manifestation of local lesions such as myomas and malignancies, or it can be presenting symptom of systemic ailments like hormonal imbalances. Out of endocrinological reasons of AUB, thyroid dysfunction plays a major role in the etiology. Thyroid function has a direct bearing on the development, metabolism and functioning of various systems on the body. [2]. Thyroid disorders are more common in women as compared to men. [3]. Thyroid dysfunction has been associated with various bleeding disorders in women. [4]. AUB can precede or accompany overt hypothyroidism or hyperthyroidism. [5]. Patients of subclinical thyroid disorder do not show relevant signs and symptoms and can go unnoticed. AUB significantly affects the quality of life. [6]. Hypothyroidism usually results in menorrhagia and hyperthyroidism causes oligomenorrhea or hypomenorrhea. [7]. Thus it becomes imperative to rule out thyroid dysfunction in all cases of AUB. In this context an effort has been made to find the pattern of AUB in thyroid dysfunction.

#### Aims and Objectives

Aim of this study is to find prevalence and pattern of abnormal uterine bleeding in females of reproductive age with thyroid dysfunction.

### MATERIAL AND METHODS

This study was conducted in the State Medical College. 300 female patients of the reproductive age, presenting in the OPD

with AUB were included in the study. Patients with local structural causes, malignancies and bleeding disorders were excluded from the study.

#### Observations

Mean age of the participants was 37.89 years with a standard deviation of 8.94 years. Majority of cases (38.67%) were in the age group 41 -50 years. (Table 1).

Table 1 Distribution of Subjects According to Age

Age (Years)	Study Group (n=300)	
	Subjects	Percentage
≤20	27	9%
21-30	38	12.67%
31-40	105	35%
41-50	116	38.67%
>50	14	4.67%
Total	300	100%
MeanAge	37.89 ± 8.94years	

There was almost equal representation of Rural (51.33%) and urban (48.67%) subjects in the group. (Table 2).

Table 2 Distribution of Subjects According to Demographic Area of Residence

Area	Study Group (n=300)	
	Subjects	Percentage
Rural	154	51.33%
Urban	146	48.67%
Total	300	100%

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Out of 300 subjects, 228 (76%) were euthyroid and 72 (24%) had thyroid dysfunction. (Table 3).

**Table 3** Distribution of Subjects According to Euthyroid Status.

Euthyroid	Study Group (n=300)	
	Subjects	Percentage
Yes	228	76%
No	72	24%
Total	300	100%

Out of 72 patients with thyroid dysfunction, 67 (93.1%) cases were of hypothyroidism and 5 (6.9%) were of hyperthyroidism. In hypothyroidism, 43 patients (59.8%) had subclinical hypothyroidism and constituted the largest group. (Table 4).

**Table 4** Distribution of Thyroid Dysfunction

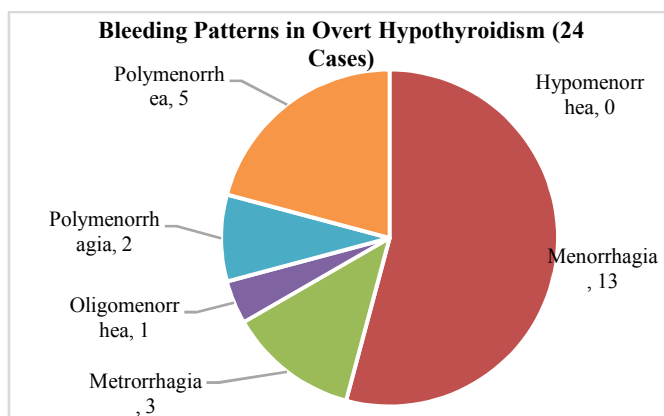
	Cases	%
Overt Hypothyroidism	24	33.3
Subclinical Hypothyroidism	43	59.8
Hyperthyroidism	5	6.9
Total	72	100

Incidence of different bleeding patterns of AUB in thyroid dysfunction are depicted in Table 5.

**Table 5** Distribution of Subjects According to Bleeding Patterns and Thyroid Dysfunction

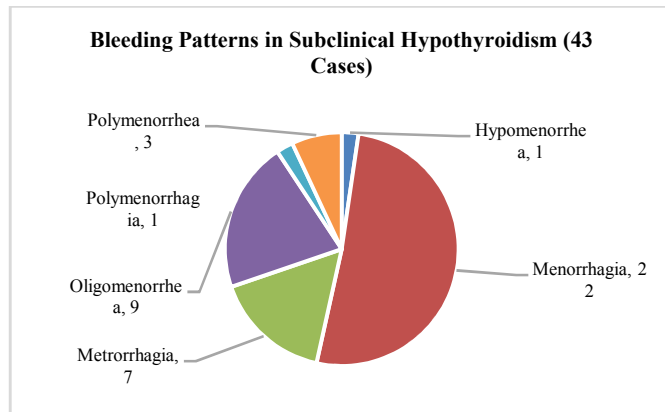
Bleeding Patterns	Overt Hypothyroid	Subclinical Hypothyroid	Hyperthyroid	Total
Hypomenorrhagia	0(0%)	1(2.3%)	2 (40%)	3 (4.2%)
Menorrhagia	13 (54.2%)	22(51.2%)	2(40%)	37 (51.3%)
Metrorrhagia	3 (12.5%)	7(16.3%)	0(0%)	10 (13.9%)
Oligomenorrhagia	1 (4.2%)	9 (20.9%)	1(20%)	11 (15.3%)
Polymenorrhagia	2 (8.3%)	1(2.3%)	0(0%)	3 (4.2%)
Polymenorrhagia	5 (20.8%)	3 (7%)	0(0%)	8 (11.1%)
Total	24 (100%)	43 (100%)	5 (100%)	72 (100%)

In case of 24 patients with overt hypothyroidism, 13(54.2%) had menorrhagia, 5(20.8%) had polymenorrhagia, 3(12.5%) had metrorrhagia, 2(8.3%) had polymenorrhagia and 1(4.2%) had oligomenorrhagia. (Chart 1).



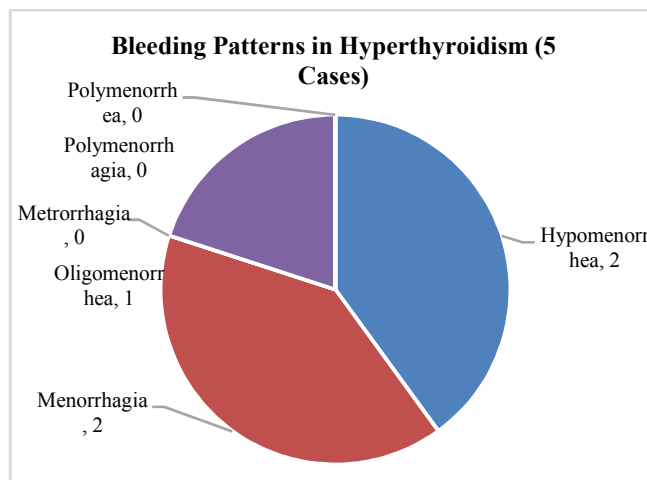
**Chart 1**

In case of 43 patients with subclinical hypothyroidism, 22(51.2%) had menorrhagia, 3(7%) had polymenorrhagia, 7(16.3%) had metrorrhagia, 1(2.3%) had polymenorrhagia and 9(20.9%) had oligomenorrhagia. (Chart 2).



**Chart 2**

In case of 5 patients with hyperthyroidism, 2(40%) had menorrhagia, 0(0%) had polymenorrhagia, 0(0%) had metrorrhagia, 0(0%) had polymenorrhagia, 2(40%) had hypomenorrhagia and 1(20%) had oligomenorrhagia. (Chart 3).



**Chart 3**

## DISCUSSION

Thyroid dysfunction has long been associated with abnormal uterine bleeding. This study was conducted to find the incidence of different bleeding patterns in thyroid dysfunction in women of childbearing age.

Farrukh R *et al* in a study on 300 patients with abnormal uterine bleeding found thyroid dysfunction in 38% cases. [8]. Menorrhagia was the most common bleeding disorder in patients with thyroid dysfunction. The present study also has the same finding.

Nayak AK in a study of 150 cases conducted to find prevalence of thyroid disorders in patients with dysfunctional uterine bleeding, found thyroid disorder in 19.33% cases. Majority of the cases were of hypothyroidism. [9]. Menorrhagia was the most frequent finding in their study, followed by metrorrhagia and polymenorrhagia. Findings are comparable to the present study.

Begum M *et al* conducted a study of AUB with 145 participants. They found thyroid dysfunction in 23.44% of cases. Women complaining of menorrhagia constituted the single largest group amongst those with thyroid dysfunction. The spectrum of bleeding patterns included polymenorrhagia, oligomenorrhagia, and menorrhagia.[10].These findings are similar to the findings of present study.

Akinepalli P *et al* in their comparative study included 50 subjects each in case group and control group.[11]. Hypothyroidism was more prevalent as compared to hyperthyroidism. Menorrhagia was the predominant abnormality in cases of thyroid dysfunction. Other bleeding patterns included metrorrhagia and polymenorrhea. Findings of their study are similar to the present study.

Hema KR *et al* studied thyroid profile and bleeding patterns in 522 cases of AUB. [12]. Menorrhagia was the most common finding in cases of hypothyroidism, followed by polymenorrhea. Oligomenorrhea and hypomenorrhea was found in hyperthyroidism. Same findings are reflected in the present study.

Rai A *et al* included 153 cases in their study on prevalence of thyroid dysfunction in AUB. [13]. Menorrhagia was the most common finding in patients with abnormal thyroid profile. This was followed by polymenorrhea, oligomenorrhea and polymenorrhea.

Thakur M *et al* included 79 AUB patients in their study. [14]. Menorrhagia was the most common bleeding pattern in cases of thyroid dysfunction followed by oligomenorrhea, metrorrhagia and polymenorrhea. These findings are in consonance with the findings of the present study.

## CONCLUSION

Abnormal uterine bleeding in females of childbearing age, who have no structural abnormality, can be due to thyroid dysfunction. Both hypothyroidism and hyperthyroidism can lead to full spectrum of bleeding patterns. Menorrhagia has been found to be the most common bleeding pattern in cases of thyroid dysfunction. Other bleeding patterns found in cases of abnormal thyroid profile include oligomenorrhea, metrorrhagia, polymenorrhea, hypomenorrhea and polymenorrhagia. Such cases of AUB can be treated with optimising thyroid dysfunction rather than some harsh intervention.

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### How to cite this article:

Balwinder Kaur *et al* (2022) 'Abnormal Uterine Bleeding - Spectrum of Bleeding Patterns in Thyroid Dysfunction', *International Journal of Current Advanced Research*, 11(06), pp. 997-999.  
DOI: <http://dx.doi.org/10.24327/ijcar.2022.999.0227>

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