

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Study Of Prevalence Of Thyroid Disorders In Women With Abnormal Uterine Bleeding.

Madhuri Patil¹, Tushar Laxman Rahane², and Prashant Uikey^{3*}.

¹Assistant Professor, Department Of Obstetrics and Gynaecology, IGGMC, Nagpur, Maharashtra, India.

²Junior Resident, Department Of Obstetrics and Gynaecology, IGGMC, Nagpur, Maharashtra, India.

³Professor and Head, Department Of Obstetrics and Gynaecology, IGGMC, Nagpur, Maharashtra, India.

ABSTRACT

Abnormal uterine bleeding (AUB) is a common gynecological problem affecting women of reproductive age. The present study aimed to investigate the association between thyroid dysfunction and AUB. A total of 210 women with AUB were included in the study, and their menstrual patterns, age, parity, socioeconomic status, thyroid function, family history of thyroid dysfunction, duration of AUB, and clinical thyroid enlargement were analyzed. The results showed that menorrhagia was the most common menstrual pattern among the study participants, and the majority of them belonged to parity 2. Most of the AUB patients were from the lower-middle socioeconomic class. The majority of the study participants were euthyroid, and 4.76% of thyroid dysfunction patients had a positive association with family history. The mean duration of AUB was higher in the thyroid dysfunction group than the normal cohort. Furthermore, 5.38% of the euthyroid group and 12.5% of the thyroid dysfunction group had thyroid enlargement. These findings suggest that thyroid dysfunction may contribute to the development of AUB, and clinicians should consider testing thyroid function in women with AUB, especially those with a family history of thyroid dysfunction. Further research is needed to understand the underlying mechanisms and establish the optimal management strategies for this population.

Keywords: Thyroid disorders, uterine bleeding

<https://doi.org/10.33887/rjpbcs/2023.14.3.19>

**Corresponding author*

INTRODUCTION

Thyroid disorders are one of the most common endocrine disorders worldwide, affecting approximately 10% of the general population, with a higher incidence in women. Similarly, abnormal uterine bleeding (AUB) is a prevalent gynecological condition affecting 20-30% of women in their reproductive age [1]. Thyroid hormones play a crucial role in the regulation of the menstrual cycle, and alterations in their levels can result in menstrual irregularities, including AUB. Despite the known association between thyroid disorders and AUB, limited research has been conducted to assess the prevalence of thyroid disorders in women with AUB [2]. Understanding the relationship between these two conditions can lead to early diagnosis and management of thyroid disorders in women with AUB, which can improve their quality of life and reproductive outcomes [3]. Therefore, this study aimed to determine the prevalence of thyroid disorders in women with AUB and evaluate the association between the two conditions.

STUDY METHODOLOGY

This cross-sectional observational study was conducted at the Department of Obstetrics and Gynecology, Indira Gandhi Government Medical College, Nagpur, from October 2020 to September 2022. The study population included women attending the Obstetrics and Gynecology Outpatient Department (OPD) and indoor married patients with age between 20 years to 45 years old women with AUB-O.

The inclusion criteria were as follows: (1) married patients of reproductive age group (20 to 45 years), (2) all patients who had major complaints of menstrual disturbances like menorrhagia, poly menorrhagia, polymenorrhagia, metrorrhagia, and intermenstrual bleeding, and (3) patients who did not have any exclusion criteria.

The exclusion criteria were as follows: (1) women with the presence of pelvic pathology such as fibroids, polyp, cervical growth, etc., (2) women with a history of bleeding diathesis and clotting abnormalities, (3) women on drugs such as aspirin, heparin, anti-thyroid agents, thyroxin, and other hormonal treatment, (4) women who were known cases of diabetes mellitus and systemic hypertension, (5) pregnant women, (6) women with an intrauterine contraceptive device (IUCD) in situ, and (7) women who were already diagnosed with thyroid disorder.

After obtaining written informed consent, a detailed history was taken, and a clinical examination was done for all eligible patients. Blood samples were collected for thyroid function tests, including serum T3, T4, and TSH levels, and the results were recorded. The data collected was entered into a pre-designed proforma, and statistical analysis was done using appropriate software.

The prevalence of thyroid disorders in women with AUB-O was determined by calculating the proportion of patients with abnormal thyroid function test results. The association between thyroid disorders and AUB-O was evaluated using appropriate statistical tests. The results were presented in the form of tables, graphs, and figures, and appropriate conclusions were drawn. The ethical guidelines and regulations were strictly followed throughout the study.

RESULTS

Table 1: Age wise patient distribution

Age	No of patients	Percentage (%)
18-24	45	24.19
25-35	93	50
36-45	48	25.81

Table 1 shows the age distribution of the study participants, where most of the patients with AUB belong to the age group of 25-35 years.

Table 2: Menstrual Pattern

Menstrual Pattern	No of Patients	Percentages
Menorrhagia	118	63.44
Amenorrhea	4	2.15
Hypomenorrhea	7	3.76
Oligomenorrhoea	37	19.89
Polymenorrhoea	4	2.15
Menometrorrhagia	16	8.6

Table 2 presents the menstrual pattern among study participants, where menorrhagia was found to be the most common pattern of menstruation.

In our study, distribution of the study population according to age and parity, where the majority of the study population belonged to parity 2. The socioeconomic status of the study participants, where most of the AUB patients belonged to the lower-middle class. The distribution of thyroid dysfunction among study participants, where most of the study participants were euthyroid.

The family history of thyroid dysfunction and its association with the study cohort, where 4.76% of thyroid dysfunction patients had a positive association with family history.

The duration of AUB in the study population, where the mean duration of AUB was found to be higher in the thyroid dysfunction group than the normal cohort.

The clinical thyroid enlargement distribution in AUB, where 5.38% of the euthyroid group and 12.5% of the thyroid dysfunction group had thyroid enlargement.

DISCUSSION

The present study examined the menstrual patterns, age, parity, socioeconomic status, thyroid dysfunction, family history of thyroid dysfunction, and clinical thyroid enlargement in patients with AUB. Menorrhagia was found to be the most common pattern of menstruation among the study population, which is consistent with previous reports [4-8].

The majority of the study population belonged to parity 2, which may indicate that women who have had more than one child may be more prone to AUB. Furthermore, the lower-middle class was found to be the most represented socioeconomic group among AUB patients, which suggests that socioeconomic status may play a role in the development of AUB.

Most of the study participants were euthyroid, indicating that thyroid dysfunction may not be the primary cause of AUB in most cases. However, a positive family history of thyroid dysfunction was found in 4.76% of the thyroid dysfunction patients, indicating a potential genetic predisposition to thyroid dysfunction in some patients with AUB.

The mean duration of AUB was found to be higher in the thyroid dysfunction group than the normal cohort, indicating that thyroid dysfunction may contribute to the persistence of AUB. Moreover, clinical thyroid enlargement was found in 12.5% of the thyroid dysfunction group compared to only 5.38% in the euthyroid group, which indicates a potential association between thyroid enlargement and AUB.

Overall, these findings suggest that while thyroid dysfunction may not be the primary cause of AUB in most cases, it may contribute to the persistence of AUB and should be evaluated in patients with AUB, particularly those with a positive family history of thyroid dysfunction or clinical thyroid enlargement. Additionally, the study highlights the potential influence of socio-economic status and parity on the development of AUB, which warrants further investigation.

Comparison with previous studies suggests that thyroid dysfunction is an important factor in the development of AUB, and it is important to consider thyroid function testing in women with AUB. Further

studies are needed to investigate the underlying mechanisms of this association and to determine optimal management strategies for women with thyroid dysfunction and AUB. Overall, these findings have important implications for the diagnosis and management of AUB and highlight the need for a multidisciplinary approach to the management of women with AUB.

CONCLUSION

In conclusion, this study found that menorrhagia was the most common pattern of menstrual bleeding among women with AUB. The majority of the study population belonged to parity 2, and most of the AUB patients belonged to the lower-middle class. Thyroid dysfunction was present in a significant proportion of the study population, with a higher prevalence observed in women with AUB compared to the general population. Additionally, the duration of AUB was found to be longer in women with thyroid dysfunction than those without. Clinical thyroid enlargement was also more common in women with thyroid dysfunction.

REFERENCES

- [1] Sudha HC et al. Int J Reprod Contracept Obstet Gynecol. 2018 Nov;7(11):4525-4530
- [2] Manjeera LM et al. Int J ReprodContraceptObstet Gynecol. 2018 Jun;7(6):2388-2392 www.ijrcog.org
- [3] Kris poppe ,Brigitte velkeniers and Glinoeer - Thyroid disease and female reproduction –clinical Endocrinology (2007)66 ,309-321,
- [4] Berek and Novak’s text book of gynaecology 14th edition)
- [5] The Journal of Obstetrics and Gynecology of India (March–April 2016) 66(2):115–119 DOI 10.1007/s13224-014-0650-0
- [6] Krishnaveni M. Evaluation of Thyroid Dysfunction in Abnormal Uterine Bleeding with Ovarian Dysfunction (AUB-O). Int J Sci Stud 2019;7(9):69-75.
- [7] Kolli SN, Agrawal M, Khithani Y, et al. Correlation of thyroid disorders with abnormal uterine bleeding (AUB). J. Evolution Med. Dent. Sci. 2020;9(07):398- 401, DOI: 10.14260/jemds/2020/91
- [8] Khanna K, Sudha V. A reterospective study on the endometrial biopsy of AUB correlated to thyroid abnormalities and endometrial thickness. J Diagn Pathol Oncol 2019;4(3):226-229.