

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20192460>

Original Research Article

Study of thyroid dysfunction in perimenopausal women with abnormal uterine bleeding

Velicheti Satya Sree*, Gomathy E.

Department of Obstetrics and Gynecology, Sri Devaraj Urs Medical College, Kolar, Karnataka, India

Received: 28 March 2019

Accepted: 06 May 2019

***Correspondence:**

Dr. Velicheti Satya Sree,

E-mail: vss6may@gmail.com

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ABSTRACT

Background: AUB is a common but complicated clinical presentation and occurs in 15-20% of women between menarche to menopause and significantly affects the women's health. Women with thyroid dysfunction often have menstrual irregularities, infertility and increased morbidity during pregnancy. The objective of present study is to find the correlation between thyroid disorders and AUB in perimenopausal women attending gynecology OPD.

Methods: In the present study, Ninety patients with AUB were included and were evaluated for the cause including thyroid abnormality. Thyroid function tests were done in all patients.

Results: Among 90 patients, 22 patients were diagnosed as hypothyroidism and 9 as hyperthyroidism, women with AUB 59 (65.4%) were euthyroid. Among 31 women with thyroid abnormality, heavy menstrual bleeding was seen in 14 (45.1%) women, 11 (35.4%) had Polymenorrhagia, 6 (19.3%) had oligomenorrhea. The frequent menstrual abnormality in women with hypothyroidism (22 women) was heavy menstrual bleeding in 9 (40.9%) women, 5 (22.7%) had oligomenorrhea, 8 (36.3%) had Polymenorrhagia. Out of 9 women with hyperthyroidism, 3 (33.3%) had oligomenorrhoea, 4 (44.4%) had heavy menstrual bleeding, 2 (22.2%) had Polymenorrhagia.

Conclusions: AUB might be because of structural or non-structural causes. Thyroid abnormalities may present in perimenopausal women with abnormal uterine bleeding, therefore proper identification of the cause of AUB is needed to give appropriate treatment to the patient. And to avoid unnecessary surgical intervention.

Keywords: Abnormal uterine bleeding, Perimenopausal, Thyroid disorders

INTRODUCTION

Perimenopause is defined by WHO as "the period in time beginning 2-8 years before the final menstrual period (FMP) and lasting up to 12 months after the FMP".¹ The perimenopause is often characterized by irregularities in the menstrual cycle in volume and frequency mostly is due to fluctuating estrogen levels.²

Perimenopausal bleeding is the excessive bleeding which occurs near the age when the menopause might be expected.³ Although irregular bleeding patterns are normal and expected part of perimenopause, incidence of

uterine pathology and associated medical complications increase in this age group.² Menstrual disorders pose a huge burden on gynaecological OPD accounting for approximately 20% of attendance.⁴ It is recognized universally that menstrual disturbances may accompany and even may precede thyroid dysfunction.⁵ The menstrual pattern is influenced by thyroid hormones directly through impact on the ovaries and indirectly through impact on SHBG, PRL and GnRH secretion and coagulation factors.⁶

Menstrual irregularities and bleeding problems, due to thyroid disorders are attributed to multiple mechanisms.

They are altered TSH response, TRH induced increased prolactin levels, altered LH response, peripheral conversion of androgens to estrogens, altered SHBG and affect on the coagulation factors.⁷ Both hypothyroidism as well as hyperthyroidism is associated with a variety of changes in reproductive function, including delayed onset of puberty, anovulatory cycles and abnormally high foetal wastage.⁸

METHODS

This study was conducted R. L. Jalappa Hospital, Sri Devaraj Urs Medical College, Kolar, India. It was a retrospective observational study.

Inclusion criteria

- Females presenting with abnormal uterine bleeding belonging to age group 40-50 years.

Exclusion criteria

- Patients who were pregnant, had an IUCD, were known to have cervical or uterine malignancy, fibromyoma, polyp, etc, any coagulation disorders, liver/renal diseases or were on medications like steroids, neuroleptics, anticoagulants and cytotoxic drugs, etc.
- Patients previously diagnosed with thyroid disorders.

Women of perimenopausal age group with abnormal uterine bleeding were taken into the study that visited the gynecology OPD and were admitted in gynecology ward in R. L. Jalappa Hospital over a period of 1 year. Demographic data was collected by referring to medical records department files and laboratory investigations.

A detailed history which includes age, parity, education, socioeconomic status, clinical symptoms, duration of symptoms, and amount of blood loss were collected. Information regarding associated gynecological complaint, any medical diseases, and previous hormonal or operative treatment were collected. Physical examination that includes detailed general examination and systemic examination, then a provisional diagnosis were made. Then all the blood investigation like complete blood count, renal function test, thyroid

function test, bleeding time, clotting time done. Pap smear and Ultra sonographic examination of pelvis reports were collected. Endometrial biopsy and histopathological examination reports were collected. The reports were collected and final diagnoses were made. Final diagnosis were compared with clinical and ultrasonography diagnosis. After collection of data, statistical analyses were done to get the results.

RESULTS

A total number of 90 subjects were qualified for the study. Among 90 patients, 22 patients were diagnosed as hypothyroidism and 9 as hyperthyroidism, women with AUB 59 (65.4%) were euthyroid (Table 1).

Table 1: Based on age of the patient (in years).

| Age (in years) | No. of patients (n=90) | Percentage (%) |
|----------------|------------------------|----------------|
| 40-44 | 48 | 53.3 |
| 45-50 | 42 | 46.6 |

Among 31 women with thyroid abnormality, heavy menstrual bleeding was seen in 13 (45.1%) women, 11 (35.4%) had Polymenorrhagia, 6 (19.3%) had oligomenorrhea (Table 2).

Table 2: Distribution of cases of abnormal uterine bleeding (AUB) according to the different bleeding patterns presented in patients with thyroid disorder.

| Menstrual disorders | No. of patients (n= 31) | Percentage (%) |
|--------------------------|-------------------------|----------------|
| Oligomenorrhea | 6 | 19.3 |
| Polymenorrhea | 11 | 35.4 |
| Heavy menstrual bleeding | 13 | 45.1 |

The frequent menstrual abnormality in women with hypothyroidism (22women) was heavy menstrual bleeding in 9 (40.9%) women, 5 (22.7%) had oligomenorrhea, 8 (36.3%) had Polymenorrhagia. Out of 9 women with hyperthyroidism, 3 (33.3%) had oligomenorrhea, 4 (44.4%) had heavy menstrual bleeding, 2 (22.2%) had Polymenorrhagia (Table 3).

Table 3: Distribution of different abnormal uterine bleeding (aub) patterns among the study population. In relation to the thyroid abnormality.

| Bleeding pattern | Hypothyroid | Hyperthyroid | Total |
|--------------------------|-------------|--------------|-------|
| Heavy menstrual bleeding | 9 | 4 | 13 |
| Polymenorrhea | 8 | 2 | 11 |
| Oligomenorrhea | 5 | 3 | 6 |
| Total | 22 | 9 | |

DISCUSSION

In a study by Komathi et al, 30% of women with AUB were found to have thyroid abnormalities of which 27% were found to be hypothyroid and 3% were found to have hyperthyroidism and remaining 70% were found to be Euthyroid.⁹ Our study also stated similar findings, 65.5% were in euthyroid state, 24.4% were hypothyroid and 10% of all the subjects were hyperthyroidism. In a study by Pahwa et al, 22% cases had hypothyroidism.¹⁰

In this study, of 22 hypothyroid patients, most of them had heavy menstrual bleeding followed by Polymenorrhagia and oligo menorrhagia. Ajmani et al, observed that of total 17 hypothyroid patients, most of the patients had menorrhagia followed by polymenorrhea, hypo/oligomenorrhea, and metrorrhagia.¹¹ Kaur et al, observed that among 14 hypothyroid patients, 9 (64.3%) had menorrhagia, 3 (21.4%) had oligomenorrhea, and 2 (14.28%) had metrorrhagia.⁵

In this study, of 9 hyperthyroid patients most presented with heavy menstrual bleeding followed by oligomenorrhea and polymenorrhea. Ajmani et al, observed among five.¹¹

Hyperthyroid patients, the commonest complaint were hypo/oligomenorrhea followed by amenorrhea. In a study by Singh et al, out of 104 hypothyroid cases the most common menstrual abnormality observed was menorrhagia (45.2%) followed by polymenorrhea (37.5%).¹²

CONCLUSION

AUB might be because of structural or non-structural causes. In our regional setup, women are not well aware about the abnormal uterine bleeding and its correlation with thyroid disorders which can manage medically. Due to the lack of knowledge women voluntarily opt for surgical intervention without proper evaluation. Thyroid abnormalities which present in perimenopausal women with abnormal uterine bleeding, therefore with proper identification of the cause of AUB appropriate treatment can be given to the patient and to avoid unnecessary surgical intervention.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Sree VS, Gomathy E. Study of thyroid dysfunction in perimenopausal women with abnormal uterine bleeding. Int J Reprod Contracept Obstet Gynecol 2019;8:2519-21.