

**Research Article**

Study of Thyroid Disorders in Women with AUB in A Medial College in Rural Area of Jabalpur (M.P.)

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Mobile no: 9479782570, 942581603, Email: drrohitchaturvedi@gmail.com**Abstract**

Background: *Thyroid gland is one of the most important vital endocrine gland and is essential for growth, development, metabolism and function of almost all organs of our body. Thyroid dysfunctions both hypothyroidism and hyperthyroidism can lead to menstrual disturbances and infertility. AUB is one of the most common clinical presentation in gynaec OPD, prevalence being 10-20% of women from puberty to menopause. This study is aimed at detecting thyroid dysfunction in patients with provisional diagnosis of AUB*

Methods: *This study was conducted in the Department of Obstetrics & Gynecology, Sukh sagar medical college & Hospital, Jabalpur. 140 women presented with AUB presenting to gynec OPD were recruited in the study. After taking Complete history of all recruited a thorough general physical examination along with pelvic examination was carried out. Basic routine investigations and T3, T4, TSH was performed by in all patients.*

Results: *In AUB cases 24.2% were diagnosed with thyroid disorder of which subclinical hypothyroidism was most common. Most common presentation of AUB was menorrhagia (41.4%). Thyroid dysfunction with AUB was commonest in age group of ≥ 45 years (33%). Most common presentation being menorrhagia in all age groups except 35-45 years, where Oligo/hypomenorrhoea was more common.*

Conclusions: *Both subclinical hypothyroid and p hypothyroid cases together were the commonest thyroid dysfunction and menorrhagia was their commonest menstrual abnormality. So this study concludes that, biochemical evaluation of thyroid functioning should be made mandatory in all provisionally diagnosed cases of DUB to detect thyroid dysfunction.*

Keywords: *Thyroid dysfunction, Hypothyroidism, Subclinical hypothyroidism, Hyperthyroidism, Menstrual disorders.*

Introduction

Thyroid gland is one of the most important vital endocrine gland and is essential for growth, development, metabolism and function of almost

all organs of our body¹. Thyroid hormones also play an important role in normal reproductive physiology directly by acting on the ovaries and indirectly by interacting with sex hormone-

binding globulin (SHBG). Thyroid dysfunctions both hypothyroidism and hyperthyroidism can lead to menstrual disturbances and infertility.² In India, thyroid disorders are among the most common endocrine diseases³ and are 10 times more common in women than in men, prevalence being 26% in women.⁴

Hypothyroidism is associated with a wide spectrum of reproductive disorders ranging from abnormal sexual development, menstrual irregularities, and infertility⁵. The effect of hypothyroidism on the menstrual cycle has been identified since the 1950s. Even subclinical Hypothyroidism may result in menorrhagia but the mechanism is incompletely understood. Subclinical hypothyroidism is also one of the reasons for recurrent pregnancy loss. The prevalence of subclinical hypothyroidism is as high as 9.5 % in women⁶.

Hyperthyroidism may occur either due Grave's or Plummer's disease. In hyperthyroidism, amenorrhoea was described as early as 1840 by Von Basedow.⁷ The menstrual changes associated with hyperthyroidism are unpredictable ranging from normal cycles to oligomenorrhoea, amenorrhoea. If occurs before puberty hyperthyroidism may be associated with delayed onset of menses. In fertile age group, oligomenorrhoea and amenorrhoea are the commonest abnormalities associated with hyperthyroidism. There could be other symptoms like nervousness, heat intolerance, weight loss, sweating, palpitations and diarrhoea.⁸

Abnormal Uterine Bleeding (AUB) is a term used to describe any type of bleeding that does not fall within the normal range for amount, frequency, duration and cyclicity.⁹ AUB is one of the most common clinical presentation in gynaec OPD, prevalence being 10-20% of women from puberty to menopause.

Various complaints include heavier or prolonged menstrual flow with or without pain, passage of clots, weakness, lethargy and reduced quality of life resulting in unnecessary, incorrect and expensive treatment and invariably ending up in

surgical treatment with its attendant risk of morbidity and mortality. As per Te Linde's Operative Gynaecology tenth edition.¹⁰ 20% to 50% of gynecologic surgical procedures are performed for menstrual dysfunction only.

AUB 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.⁸ Treatment of thyroid abnormalities can correct menstrual abnormalities and improve fertility. Timely detection of thyroid dysfunction in patients presenting with AUB and their proper management can thus help to prevent unnecessary surgical interventions and reduce financial burden and improves the quality of life. Hence this study is to evaluate the thyroid dysfunction in patients having AUB from puberty till menopause.

Methods

The present study was conducted in the Department of Obstetrics & Gynecology, Sukh sagar medical college & Hospital, Jabalpur over a period of 6 months between January 2018 to June 2018. 140 women presented with AUB presenting to gynec OPD were recruited in the study.

Inclusion criteria

All women from puberty till menopause presenting with AUB to OPD.

Exclusion criteria

- Pregnancy or related causes of bleeding.
- Women with IUCD/ on Hormone therapy .
- Known case of autoimmune disorders/ liver disorders/coagulopathy.
- Known case of premalignant lesion /malignancy of genital organs.
- Suspected pelvic infection.
- Not giving consent.

After taking complete history of all recruited patients with regards to age, parity, menstrual history, onset and duration of complaints, amount of blood flow and any other specific complaints, a thorough general physical examination along with

pelvic examination was carried out. All the findings were noted down in a predesigned profarma. Basic routine investigations like Hb, PCV, RBS, urine routine, BT, CT, ESR, Chest X ray, pap smear and ultrasound of abdomen and pelvis were performed followed by T3, T4, TSH in all patients.

Normal range of thyroid hormones were take as:

Serum T4 – 60-120 ng/ml

Serum T3 – 0.8 -16 ng/ml

Serum TSH – 0.5-5 mU/ml

Based on these values, patients were categorised as:

- Euthyroidism
- Hypothyroidism
- Subclinical hypothyroidism
- Hyperthyroidism.

Results

In the present study, maximum patients presenting with AUB were from the age group of 35-45years (44.2%) followed by age group of 21-34 years (32.2%) (Table 1). Parity wise, AUB was found common in multiparous women (28.6% in para-2 & 25.7% in para-3) than nullipara (Table 2). In AUB cases 24.2% were diagnosed with thyroid disorder of which subclinical hypothyroidism was most common followed by hypothyroidism (table 3). In present study most common presentation of AUB was menorrhagia (41.4%) followed by polymenorrhoea. (table -4). According to present study thyroid dysfunction with AUB was

commonest in age group of ≥ 45 years (33%) followed by ≤ 20 years and 35-45 years (table- 5). Most common presentation being menorrhagia in all age groups except 35-45 years, where Oligo/hypomenorrhoea was more common (table- 6,7).

Table 1: Age wise distribution

Age	No. of patients	Percentage
≤ 20 years	27	19.3
21 -34 years	45	32.2
35-45 years	62	44.2
≥ 45 years	06	4.3

Table 2: Parity wise distribution

Parity	No of patients	Percentage (%)
Nullipara	32	22.8
P1	21	15
P2	40	28.6
P3	36	25.7
≥ 4	11	07.9

Table 3: Distribution of patients according to thyroid status

Thyroid function status	No. of patients	Percentage
Euthyroid	106	75.8
Subclinical Hypothyroid	19	13.6
hypothyroid	10	7.1
Hyperthyroid	05	3.5

Table 4: Distribution of patients according to Pattern of bleeding

Bleeding pattern	No. of patients	Percentage
Acyclical	08	5.8
Menorrhagia	58	41.4
Polymenorrhoea	30	21.4
Polymenorrhagia	18	12.9
Oligo/hypomenorrhoea	24	17.1
Amenorrhoea	02	1.4

Table 5: Age wise distribution of patients with thyroid disorder

Age	Euthyroid	Hypothyroid	Subclinical hypothyroid	Hyperthyroid	Percentage (of total dysfunctions)
≤ 20 years (27)	20	03	03	01	25.9
21 -34 years (45)	36	02	05	02	20
35-45 years (62)	46	04	10	02	25.8
≥ 45 years (06)	04	01	01	00	33

Table 6: Age wise distribution of bleeding patterns

Age	Acyclical	Menorrhagia	Poly-menorrhoea	Poly menorrhagia	Oligo/hypo menorrhoea	amenorrhoea
≤ 20 years (27)	4	14	2	2	4	1
21 -34 years (45)	3	26	10	4	2	0
35-45 years (62)	0	14	17	12	18	1
≥ 45 years (06)	1	4	1	0	0	0

Table 7: Pattern of bleeding in thyroid disorder

bleeding patterns	Euthyroid	Hypothyroid	Subclinical hypothyroid	Hyperthyroid
Acyclical(08)	7	0	1	0
Menorrhagia(58)	40	7	11	0
Polymenorrhoea(30)	25	2	3	0
Polymenorrhagia(18)	15	0	2	1
Oligo/hypomenorrhoea(24)	18	1	2	3
Amenorrhoea(02)	01	0	0	1

Discussion

In present study, majority of the patients were in the age group of 35-45 year (44.2%) followed by 21-34 years (32.2%) which correlates with other studies like Narula et al and Sangeets Pahwa et al, where 32.8% and 42% patients were there in the age group of 31-45 years respectively.^{11,12}

In our study, majority of patients were of second parity (28.6%) followed by para3 (25.7%). This also corresponds with the report by Pilli et al¹³, where majority of the patients were multiparous but contradicts with the report of Kumar et al¹⁴ in which majority of patients were nulliparous.

Among 140 patients of AUB, 34 were diagnosed with thyroid dysfunction, of which only 5 patients (3.5%) had hyperthyroidism. Remaining 96.5% of patients had hypothyroidism including both overt and subclinical variety. Menorrhagia was the most common menstrual irregularity found in our study and was seen in 41.04% of patients. This can be compared with other studies like Kumar et al¹⁴.

In present study Thyroid dysfunction was commonest in the age group of ≥ 45 years (33%). Thyroid dysfunction was least common in the age group of 21-34 years (20%). This shows that thyroid dysfunction becomes more common as age advances and in this study it is commonly seen in age group of more than 45 years. This can be compared with the study of Deshmukh et al¹⁵ where Thyroid dysfunction was commonest in the age group of 41-45 years (42.8%) and was least common in the age group of 21-30 years (22.2%).

In our study the patients with menorrhagia were maximally presenting as hypothyroid (31.04%) and the patients who were having oligomenorrhoea presented equally as hyperthyroid (12.5%) and hypothyroid(12.5%). This corresponds with the study of Deshmukh et al¹⁵ where 32.5% patients with menorrhagia had hypothyroidism.

Conclusion

Present study concludes that thyroid dysfunction is important cause of menstrual irregularities .thyroid profile (T3, T4, TSH) must be a part of investigations done in patients presenting with AUB. Timely diagnosis and management of thyroid disorders in women with AUB can avoid unnecessary hormonal treatment and surgical interventions.

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