Research Paper

Evaluation of Thyroid Disorders in Abnormal Uterine Bleeding

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ABSTRACT

Background: Abnormal Uterine Bleeding (AUB) is a common clinical presentation in gynecology. Alteration in thyroid hormones level has been associated with menstrual disturbances. This study is aimed to know the prevalence of thyroid disorders amongst AUB patients and also the different patterns of menstrual abnormalities associated with thyroid disorders.

Methods: 100 Patient of clinically diagnosed AUB were taken from gynecology OPD. All the patients from 19 to 45 age groups presenting with menstrual disturbances were tested for thyroid function by measuring ST3, ST4, and S.TSH.

Results: Out of 100 women of AUB, majority were in the age group of 31-40 years (38%). 44% presented with menorrhagia. 65% were euthyroid, 17% had subclinical hypothyroidism, 15% had overt hypothyroidism and 3% were diagnosed as hyperthyroid. Subclinical hypothyroidism, overt hypothyroidism and hyperthyroidism were detected mostly in the age group of 31-40 years. The commonest bleeding abnormalities in hypothyroid patient were oligomenorrhoea While most of the hyperthyroid cases were having menorrhagia.

Conclusions: The study concludes that biochemical evaluation of thyroid function is an easy, reliable method and should be made mandatory in all cases of AUB.

Keywords: Abnormal Uterine Bleeding, Thyroid Disorders

INTRODUCTION

Abnormal Uterine Bleeding is a common complaint encountered in Gynaecology OPD. It occurs in 9 – 14% of women from Menarche to Menopause affecting quality of life imposing financial burden[1.] Thyroid dysfunction causes broad spectrum of reproductive disorders from abnormal sexual development, menstrual irregularities, infertility and premature menopause[2]. Thyroid disorders are 10 times more common in women and increase prevalence of thyroid disorders in women is possibly due to auto immune nature[3].Menstrual disturbances accompany clinical alterations in thyroid function and every clinician must have encountered altered menstrual pattern among women suffering from hypo or hyper thyroidism. Diseases of thyroid gland are among the most prevalent disorders worldwide second only to diabetes[4].

Term used to describe AUB3

- **Oligomenorrhoea:** bleeding occurs at interval of >35 days.
- **Polymenorrhoea**: bleeding occurs at interval of <21 days.
- **Menorrhagia**: bleeding occurs at normal interval but with a heavy flow (≥80 ml) or duration of >7 days.
- **Meno- metrorrhagia:** bleeding occurs at irregular/ non-cyclic

interval with heavy flow (≥80 ml) or duration of >7 days.

- **Metrorrhagia:** irregular bleeding that occurs between ovulatory cycles inter menstrual bleeding.
- Objective of this study is to evaluate thyroid disorder in patients with Abnormal Uterine Bleeding in reproductive age group from 15 to 45 years which will help in further management.

METHODS

It is a cross-sectional, prospective observational study, conducted on 100 women coming to Out-patient department with complaint of AUB.

Inclusion criteria

Females in age group of 15-45 years with complaint of abnormal uterine bleeding.

Exclusion criteria

Known cases of thyroid disease, hyperprolactinemia and coagulopathy and also the patients on anticoagulant drugs.

A detailed history of all the patients included in the study was taken. The detailed gynaecological history and also the detailed present and past menstrual history was taken from the patients. A detailed examination including general and gynaecological examination was done by which the obvious pelvic pathologies were ruled out. All patients were advised for routine investigations like CBC, Blood sugar, Urine routine and BT, CTand thyroid profile which included T3, T4 and TSH. Ultrasound of the pelvis was also done to rule out any pelvic pathology as the cause of menstrual irregularities.

After the reports of thyroid, the patients were diagnosed as euthyroids, subclinical hypothyroids, hypothyroids and hyperthyroids. Datas were collected and mentioned in percentages and statistical analysis done.

RESULTS

The maximum no. of patients of AUB in our study were of 31-40 years of age (38%), followed by 21-30 yrs of age (31%) (Table 1).

Table 1: Age-wise Distribution of AUB Cases

Age groups	No of patients	Percentage
<20	21	21
21-30	31	31
31-40	38	38
>40	10	10

(Source: Primary Data)

The mean age was 29.5 years. Majority of patients were multiparous with parity more than or equal to 2(34%), while 20% were unmarried and 6% nulliparous (Table 2).

Table 2: Parity of AUB patients

Parity	No of Patients	Percentage
Unmarried	20	20
Nullipara	6	6
Primipara	20	20
Para 2	34	34
⩾Para 3	20	20

(Source: Primary Data)

The major menstrual complaint of AUB patients was menorrhagia (44%), 20% presented with oligomernorrhoea, 16% had polymenorrhoea.(Table 3).

Table 3: Bleeding Pattern in AUB Patients

Bleeding Pattern	No of Patients	Percentage
Menorrhagia	44	44
Metrorrhagia	10	10
Meno- Metrorrhagia	10	10
Polymenorrhoea	16	16
Oligomenorrhoea	20	20

(Source: Primary Data)

65% of the patients with AUB were euthyroid, 24% had hypothyroidism and 09% were diagnosed to be subclinical hypothyroid. 2% patients had hyperthyroidism (Table 4)

Table 4: Thyroid Dysfunction in AUB patients

	Euthyroid	Hypothyroid	Sub Hypothyroid	Hyperthyroidism
No of Patients	65	24	9	2

(Source: Primary Data)

Table 5: Distribution of different AUB Patterns in Relation to Thyroid Dysfunction

Bleeding Pattern	No of Patients	Euthyroid	Hypothyroid	Subclinical Hypothyroid	Hyperthyroid
Menorrhagia	44	36	5	2	1
Polymenorrhoea	16	11	3	1	1
Metro rrhagia	10	2	7	1	
Meno-Metrorrhagia	10	9	1		
Oligomenorrhoea	20	7	8	5	

(Source: Primary Data)

In the current study, patients with hypothyroidism (overt) presented mainly with oligomenorrhoea (8 out of 24 patients i.e.33.3%). Patients who were hyperthyroid presented with menorrhagia (Table 5).

DISCUSSION

The majority of patients of AUB (38%) were in the age group of 31-40 years in our study. Pilli et al had 58% cases in age group of 21-30 years[5]. Surendra Kumar Jinger et al in their study of 100 women with AUB had 49% in 20-30 yr age group.[6]

Pilli et al reported that AUB is seen in 87% multipara, 7% primipara and 6% nulliparous.[5] In present study also majority of patients were Para 2 (20%). Menorrhagia is the main complaint in the patients of abnormal uterine bleeding (44%) which was also seen in the studies by Pilli et al in 34%, in the study by Pahwa S et al study it was in 50% patients and in Deshmukh et al study 40% had menorrhagia.[5,7,8]

Oligomenorrhoea is the next common menstrual disorder followed by polymenorrhoea and metrorrhagia.

35 patients out of 100 patients, showed thyroid dysfunction (35%). In the study of Pahwa S et al 24% had thyroid dysfunction.[7] In the study by Marimuthu K et al, out of 250 cases of AUB,68 (27.2%)cases had thyroid dysfunction.[9]Jinger SK et al found 47% patients having thyroid dysfunction in their study and 53% euthyroid.[6]

The main thyroid dysfunction noted was hypothyroidism including subclinical (9%) and overt hypothyroidism (24%) in our study. Similarly, in the study by Marimuthu K et al 15.6% were hypothyroid, 3.2% had subclinical hypothyroidism and 7.2% were hyperthyroid.[9]Pahwa S et al observed in their study that 22% of cases were found to be hypothyroid, 2% hyperthyroid and 76% were euthyroid.

Sampath S et al had done their study on clinic-biochemical spectrum of hypothyroidism and found a mean age of 36.2 years among 944 women referred for thyroid testing. In this study, they found that the mean age of females with subclinical hypothyroidism was 5.4 years less than those with overt hypothyroidism.[10]

65% of cases of hypothyroid (both subclinical and overt) in our study, were exhibiting OLIGOMENORRHOEA. The similar results were seen in 57.13% patients in the study by Nair RV et al and in 46.15% patients in the study by Bharucha M et al.[11,12]

The main symptom in patients diagnosed to have hyperthyroidism was MENORRHAGIA (50%) in our study which was comparable to 63.6%patients in the study by Singh L et al.[13]

CONCLUSION

With the advent of modern hormonal assay techniques, precise estimation of thyroid hormone in serum is possible in a rapid and reliable manner. Hence investigating a patient with AUB, evaluation of thyroid function forms an essential component. AUB patients in the age group of 31-40 years mostly suffered from thyroid disorders and thus must be evaluated for it. This can avoid unnecessary hormonal treatment and surgical intervention.

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