

Original Research Article

To study the thyroid profile in menstrual disorder at tertiary care hospital in northern western Rajasthan, India

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Received: 07 March 2017

Accepted: 01 April 2017

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ABSTRACT

Background: Abnormal uterine bleeding is a common but complicated clinical presentation. It is one of the most frequently encountered conditions in gynaecology and is defined as abnormal bleeding from the uterus.

Methods: Present prospective study was conducted on 100 patients who presented with abnormal uterine bleeding at Sardar Patel Medical College, Bikaner, Rajasthan, India.

Results: Among 100 women, 39 had hypothyroidism, 8 patients had hyperthyroidism rest 53 were euthyroid. Out of 39 hypothyroid patients, 23 had menorrhagia, 3 had oligomenorrhea and out of 8 patients with hyperthyroidism patients, 6 had oligomenorrhea, 2 had hypomenorrhoea.

Conclusions: The menstrual irregularities are significantly more frequent in patients with thyroid dysfunction and menorrhagia was the commonest menstrual abnormality. The study concludes that biochemical evaluation of thyroid function should be made mandatory in all cases of AUB.

Keywords: AUB, Endometrial hyperplasia, Menorrhagia, Thyroid dysfunction

INTRODUCTION

Abnormal uterine bleeding is a common but complicated clinical presentation. It is one of the most frequently encountered conditions in gynecology and is defined as abnormal bleeding from the uterus. It occurs in 9-14% of women between menarche and menopause, significantly impacting quality of life and imposing financial burden.¹ Thyroid dysfunction causes a broad spectrum of reproductive disorders ranging from abnormal sexual development to menstrual irregularities, infertility and premature menopause.²

A relationship between the thyroid gland and the gonads is suggested by the far more frequent occurrence of

thyroid disorders in women than in men and by the common appearance of goiter during puberty, pregnancy and the menopause.³ While activity of the thyroid is closely linked with the process of ovarian maturation, the thyroid gland is itself dependent on direct and indirect stimuli from the ovary to discharge its own function.⁴ It is recognized universally that menstrual disturbances may accompany and even may precede thyroid dysfunction. In the present study thyroid status of patients presenting with abnormal uterine bleeding was assessed by TSH, T3, and T4 assay. Both hypothyroidism and hyperthyroidism may result in menstrual disturbances.

Hyperthyroidism reduces menstruation and hypothyroidism causes menorrhagia. Hyperthyroidism in

contrast is associated with a menorrhagia and oligomenorrhoea and the decrease in flow is proportional to the severity of the thyrotoxicosis.⁵

METHODS

Present study was conducted on 100 patients who presented with abnormal uterine bleeding at Sardar Patel Medical College, Bikaner, Rajasthan, India. It was a prospective study conducted on 100 premenopausal women who were presented with abnormal uterine bleeding to the outpatient department.

Inclusion criteria

- All premenopausal women with AUB.

Exclusion criteria

- Refusal for participation in study
- Women who are on drugs (like antiepileptic, antipsychotic etc.) or hormone therapy.

After selecting the women, informed consent was obtained. The case history and clinical examination of them were done, requested to do thyroid functioning test in fasting status in early morning and the results were evaluated. Other required investigations as per requirement were done and the patients were managed accordingly. The thyroid function tests were done by radioimmuno assays in the lab.

RESULTS

There were 100 women who were included in the study. Most of patients (26%) in 26-30 years age groups.

Table 1: Age distribution of the patients.

Age (years)	No. of cases	Percentage
15-19	8	8
20-25	23	23
26-30	26	26
31-35	18	18
36-40	15	15
41-45	10	10
Total	100	100

Table 2: Distribution of patients according to thyroid status.

Thyroid status	No. of cases	Percentage
Euthyroid	53	53
Hypothyroid	39	39
Hyperthyroid	8	8
Total	100	100

Among 100 women, 39 had hypothyroidism, 8 patients had hyperthyroidism rest 53 were euthyroid.

Out of 39 hypothyroid patients, 23 had menorrhagia, 3 had oligomenorrhoea and out of 8 patients with hyperthyroidism patients, 6 had oligomenorrhoea, 2 had hypomenorrhoea.

Table 3: Distribution of patients according to bleeding pattern.

Pattern of bleeding	Hypothyroid (n=39)	Hyperthyroid (n=8)
Menorrhagia	23	0
Polymenorrhoea	7	0
Acyclic	4	0
Oligomenorrhoea	3	6
Hypomenorrhoea	0	2
Metrorrhagia	2	0

DISCUSSION

Among 100 women, 39 had hypothyroidism, 8 patients had hyperthyroidism rest 53 were euthyroid. Which was similar to study done by Joschi et al and Bhavani N et al.^{6,7} One of the explanations is activity of thyroid is closely linked with the process of ovarian maturation. The thyroid gland is itself dependent on direct and indirect stimulation from the ovary to discharge its own function.

Out of 39 hypothyroid patients, 23 had menorrhagia, 3 had oligomenorrhoea and out of 8 patients with hyperthyroidism patients, 6 had oligomenorrhoea, 2 had hypomenorrhoea. which was similar to study done by Scott and Mussey and Kaur T et al.^{8,9}

Thyroid disorders are more common in women with menstrual irregularities ranging from menorrhagia to oligomenorrhoea as compared to general population. Woman with hypothyroidism, commonly presents with anovulation and unopposed oestrogen activity causes endometrial hyperplasia which may outgrow the blood supply and may cause local areas of necrosis that breaks down and produces bleeding. In hypothyroid patients, the menstrual abnormality is much more severe and anovulatory cycles are common.

CONCLUSION

The menstrual irregularities are significantly more in patients with thyroid dysfunction and may precede thyroid dysfunction. Thyroid dysfunction should be considered as an important etiological factor for menstrual abnormality. Biochemical estimation of T3, T4, TSH should be made mandatory in Abnormal uterine bleeding.

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: Jinger SK, Verma A, Dayma I, Talreja T. To study the thyroid profile in menstrual disorder at tertiary care hospital in northern western Rajasthan, India. *Int J Res Med Sci* 2017;5:2212-4.