

A Study of Thyroid Dysfunction in Abnormal Uterine Bleeding

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Abstract

It is recognized universally that menstrual disturbances may accompany and even may precede thyroid dysfunction. The objective of the study was to evaluate the prevalence of thyroid dysfunction in abnormal uterine bleeding and correlation with menstrual disorders. The present study was conducted on 100 patients who presented with abnormal uterine bleeding in gynecology OPD VIMS bellary. Among the 100 women 17 (%) had hypothyroidism, 2 (%) had hyperthyroidism and 81 (%) were euthyroid. Menorrhagia was the most common menstrual disorder in hypothyroidism and oligomenorrhoea in hyperthyroidism. In the present study 14(%) patients had proliferative endometrium, 3(%) secretory endometrium of hypothyroid patients and secretory endometrium in 2 (%) hyperthyroid patients. The menstrual irregularities are significantly more frequent in patients with thyroid dysfunction and menorrhagia was the commonest menstrual abnormality.

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Received on 24.11.2017,
Accepted on 08.12.2017

Keywords: Abnormal Uterine Bleeding; Dysfunctional Uterine Bleeding; Menorrhagia; Oligomenorrhoea; Thyroid Dysfunction.

Introduction

Abnormal uterine bleeding best defined as abnormal bleeding from the uterus in the absence of organic

disease of the genital tract. The term DUB applies to any abnormal uterine bleeding, including disturbances of the menstrual cycle, regular or irregular uterine bleeding and alterations in amount and the duration of menstrual loss, but most commonly implies to excessive regular menstrual bleeding or essential menorrhagia. In clinical practice the precise nature of the dysfunction is often not determined and the diagnosis of DUB is usually made by exclusion of organic disease of the genital tract [1]. Menstrual disorders are one of the most frequently encountered conditions in gynecology OPD. Thyroid hormones play an important role in normal reproductive physiology through direct effects on the ovaries and indirectly by interacting with sex hormone-binding globulin. Thyroid dysfunction can lead to menstrual irregularities and infertility [2]. In India, thyroid disorders are among the most common endocrine diseases [3]. Onset of thyroid disorders increases with age, and it is estimated that 26% of premenopausal and menopausal women are diagnosed with thyroid disease [4]. Thyroid disorders are more common in women than in men and in older adults compared with younger age groups [5]. The prevalence of subclinical hypothyroidism is as high as 9.5% in women [6]. Hyperthyroidism occurring before puberty has been reported to delay the onset of menses. In women of fertile age group, oligomenorrhoea and amenorrhoea are the commonest abnormalities associated with hyperthyroidism [7]. These irregularities sometimes precede thyroid dysfunction.

Objective

The objective of the study was to evaluate the prevalence of thyroid dysfunction in abnormal uterine bleeding and correlation with menstrual disorders.

Exclusion Criteria

Patients with menstrual disorder having any known organic pathology like uterine fibroid, adenomyosis, tubercular endometriosis, polyp, uterine malignancy, etc. and patients with IUCD in utero were excluded from study

Materials and Methods

The present study was conducted in the Department of Obstetrics and Gynecology, vims, bellary, in the period of 12 months between March 2016 and March 2017. 100 women of reproductive age group 20–45 years were selected. After taking detailed history regarding age, parity, age of menarche, menstrual disorders and dysmenorrhea, general physical examination along with pelvic examination was carried out in women with menstrual complaints. Routine investigation like Hb, Platelet count, TLC, DLC, ESR, ABO-Rh, and thyroid

profile that includes T3, T4, TSH, and anti-TPO antibody was performed in all patients. They were also subjected to special investigations which include Trans-abdominal scan, endometrial sampling, and hysteroscopy (wherever indicated).

Results

Out of 100 patients studied, 17 had hypothyroidism, 2 patient had hyperthyroidism and rest 81 were euthyroid (Table 1). Out Of 17 hypothyroid patients 12 had menorrhagia, 3(21.4%) had oligomenorrhoea and 2 patient with hyperthyroidism was found to have hypomenorrhoea (Table 2). On endometrial sampling, hypothyroid patients mainly had proliferative endometrium (73.91 %) and in 2 (2%) cases of hyperthyroidism had secretory endometrium. Out of euthyroid patients 44 (58.89%) had proliferative and 25 (32%) had secretory endometrium.

Table 1:

Thyroid status	No of Patients	Percentage %
Euthyroid	81	81%
Hypothyroid	17	17%
Hyperthyroid	2	2%

Table 2: Distribution of patients according to thyroid status in relation to type of bleeding

Type of bleeding	Hypothyroid no (%)	Hyperthyroid no (%)
Menorrhagia	12(70.58)	0
Metrorrhagia	3(17.64)	0
Oligomenorrhoea	2(11.76)	0
Hypomenorrhoea	0	2(100)
Total	17	2

Table 3: Distribution of patients according to bleeding pattern in relation to tsh level

Bleeding pattern	TSH level	Thyroid status	Total
Menorrhagia	8-14	Hypothyroid	12
Metrorrhagia	7-10.2	Hypothyroid	3
Oligomenorrhoea	14.6-21	Hypothyroid	2
hypomenorrhoea	0.2	Hyperthyroid	2

Table 4: Distribution of patients with thyroid dysfunction and relation of endometrial pathology

Thyroid Status	Endometrial pathology					Total no
	Proliferative no (%)	Secretory no (%)	Endometrial hyperplasia no (%)	Irregular ripening no (%)	Irregular shedding no (%)	
Hypothyroid	13(76.47)	3(17.64)	1(5.88)	0	0	17(17)
Hyperthyroid	0	2	0	0	0	2(2)
Euthyroid	50(61.72)	24(29.62)	4(5.26)	1	2	81(81)
Total	63	29	5	1	2	100

Table 5: Patients with dysfunctional uterine bleeding according to usg in relation to histopathology

Histopathology	Endometrial thickness (mm) on USG			Total
	< than 8mm	8.1- 14mm	>14.1mm	
Proliferative	45(63.38)	12(57.14)	-	57(57)
Secretory	24(33.38)	8(38.09)	-	32(32)
Endometrial hyperplasia	1(1.40)	1(4.76)	8(8)	10(10)
Irregular ripening	0	0	-	0
Irregular shedding	1(1.40)	0	-	1(1)
Total	71	21	8	100

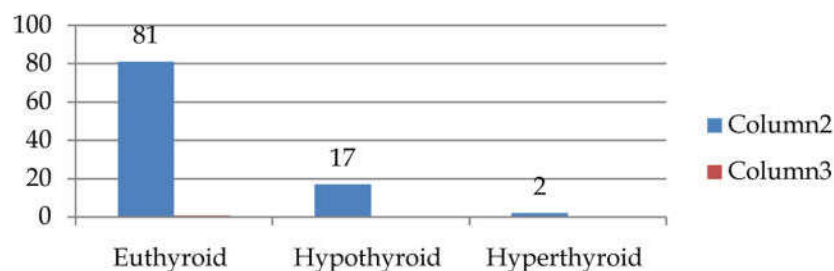


Fig. 1:

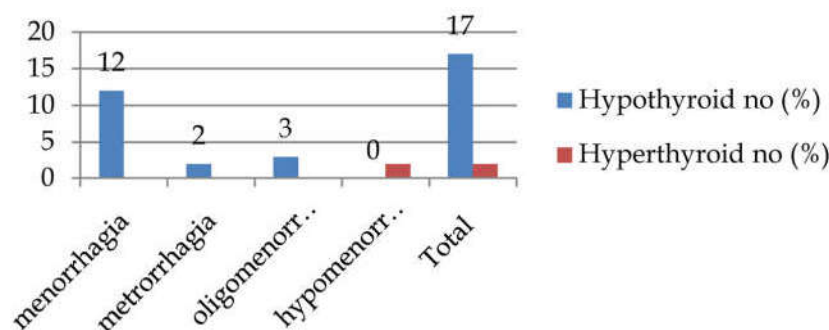


Fig. 1:

Discussion

Thyroid disorders in general and hypothyroidism in particular are the common causes of menstrual disorders in Women population. Both hypothyroidism and hyperthyroidism may result in menstrual disturbances. Menarche, pubertal growth and development, menstrual cycles, fertility and fetal development, postpartum period, reproductive years, and postmenopausal years are profoundly influenced by the thyroid status of women. Scot and Mussey observed abnormal menstrual pattern in 56% of myxedematous patients. Menorrhagia and metrorrhagia alone or combined constituted abnormal pattern in 75% of patients [8]. It is recognized universally that menstrual disturbances may accompany and even may precede thyroid dysfunction. Menorrhagia was the most common complaint among the patients with menstrual disorders. Similar were observations of Pahwa [9]

(50%) and Padmaleela [10] (50%), where menorrhagia was the most common complaint. Wilansky et al showed a prevalence of 22% of early hypothyroidism by thyrotropin releasing hormone test in menorrhagic women, that is much higher than that found in general female population [11]. Joschi et al showed 44% of the women with menstrual abnormality were apparently euthyroid. Menstrual irregularity was significantly more frequent in hypothyroidism or hyperthyroidism in more than 45% of cases this preceded the appearance of goiter or clinical sign and symptoms [12]. In present study 81% patients were euthyroid. 17% patients were hypothyroid and 2% of the patients were hyperthyroid. Sangeeta Pahwa et al observed in their study that 22% of cases were hypothyroid, 2% hyperthyroid and 76% euthyroid [13]. Hyperthyroidism reduces menstruation and hypothyroidism causes menorrhagia. Kaur et al observed in their study that 85% of the patients with abnormal uterine bleeding were euthyroid, 14% hypothyroid and 1% hyperthyroid [14].

These studies shows that thyroid disorder are more common in patients with dysfunctional uterine bleeding. Both hypothyroidism and hyperthyroidism may result in abnormal uterine bleeding. Thyroid function should be done in patients presenting with dysfunctional uterine bleeding.

Conclusion

From our study, it may be concluded that there is a strong correlation of thyroid dysfunction with menstrual disorders. In the patients with menstrual dysfunction, if thyroid disorders are timely diagnosed and treated, the menstrual irregularities settle, and unnecessary intervention like hormonal treatment and surgery can be avoided. The menstrual irregularities are significantly more frequent in patients with thyroid dysfunction and may precede thyroid dysfunction. Further systematic study of thyroid dysfunction in dysfunctional uterine bleeding is warranted.

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