THYROID DYSFUNCYION IN YOUNG WOMEN WITH ABNORMAL UTERINE BLEEDING IN KANCHEEPURAM DISTRICT

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ABSTRACT

Background: To evaluate thyroid dysfunction in abnormal uterine bleeding and non responding cases of menorrhagia.

Material and Methodology: 136 women with abnormal uterine bleeding attending Gynaec and Medicine OPD of SSSMCH ammapettai, over a period of one year were selected for this study. Weight, BP measured, BMI calculated, thyroid profile, USG for uterine, ovarian morphology ,endometrial thickness and endometrial biopsy were done as per the standard protocol.

Results: Hypothyroidism was seen in 38% of young women,25% in reproductive age,9% Hyperthyroidism in perimenopausal women. In 56% initial symptom was menorrhagia,17% were non-responding cases of menorrhagia, 63.4% women had Hypothyroidism and menorrhagia, 74.3% were obese, 17% had occult PCOD, 71.4% had DUB and in 64.8% endometrium was proliferative

Conclusion: Incidence of Hypothyroidism is 60.3% and subclinical thyroid dysfunction 22.4% which is higher than normal average. **Our center is within 40kms radius of nuclear reactor at Kalpakkam & surrounded by mountains**

KEYWORDS: Abnormal uterine bleeding**,** Hypothyroidism, Menorrhagia.

INTRODUCTION:

Abnormal uterine bleeding is a common but complicated clinical presentation, accounting for at least 20% of all new outpatient visits[(1)]. These complaints may significantly affect quality of life, [(2)] result in time off work, [(3)] lead to surgical interventions including hysterectomy, [(4)] and ultimately have a significant impact on the health care system. [(5)] As commonly used, dysfunctional uterine bleeding (DUB) refers to 'abnormal uterine bleeding which is not due to demonstrable pelvic disease, complications of pregnancy or systemic disease'. It is a diagnosis of exclusion. [(6)]

Thyroid disorders are 10 times more common in women, these high prevalence of thyroid disorders in women is possibly due to autoimmune nature of thyroid disorders. [(7)] At extremes of the reproductive years, irregular cycles resulting from anovulation can occur. Following menarche, the immature hypothalamic-pituitary-ovarian axis may result in anovulatory cycles for two to three years. [(8)]

Abnormal uterine bleeding (AUB) is the overwhelming term and may be defined as any variation from the normal menstrual cycle, and includes changes in regularity and frequency of menses, in duration of flow, or in amount of blood loss. It is thus used to describe any departure from normal menstruation. It has long been recognized that thyroid dysfunction may have profound effects on the female reproductive system. 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. [(9)]

It is recognized universally that menstrual disturbances may accompany clinical alterations in thyroid function, and every clinician has encountered altered menstrual patterns among women suffering from hypothyroidism and hyperthyroidism. 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. Hence present study was undertaken to evaluate the thyroid function in patients having abnormal uterine bleeding.

MATERIALS AND METHODS:

136 women who presented with abnormal uterine bleeding attending Gynec opd of SSSMCH&RI, Ammapettai over a period of one year were selected for this study, weight and Bp checked, BMI calculated, thyroid profile, USG pelvis to evaluate uterine and ovarian morphology and endometrial thickness was done .Detailed history, clinical examination and endometrial biopsy were examined.

RESULTS:

Table 1: Thyroid profile in 136 AUB women.

Thyroid function	No of cases	%
Euthyroid	13	9.5%
Subclinical	30	22.4%
Hypothyroid	82	60.3%
Hyperthyroid	11	7.8%

Table 2: Thyroid dysfunction in various age group.

Age	Euthyroid	Hypothyroid	Hyperthyroid	Subclinical
Less than 18	3	8	-	-
19-25	5	44	2	2
26-35	2	24	6	20
More than 36	3	6	3	8

Table 3: Menstrual pattern and thyroid function:

Thyroid status	No of cases	Menorrhagia	Oligomennorea	Irregular
Subclinical	30	23	7	-
Euthyroid	13	5	3	5
Hypothyroid	82	52	26	4
Hyperthyroid	11	4	4	11

Table 4:Corelation between BMI thyroid status and menstrual pattern

		Thyroid status			Menstrual pattern		
BMI	**No of cases**	**Euthyroid**	**Hypothyroid**	**Hyperthyroid**	**Menorrhagia**	**Oligomennorhea**	**Irregular**
Less than 19	22	7	12	-	13	4	5
20-25	48	4	37	9	26	18	4
26-35	66	2	53	12	53	11	2

Table 5: Ultrasonogram findings in 136 women.

Ovarian morphology	No of cases	Uterine morphology		Endometrial Thickness
		Uterine Morphology	No of Cases	
Normal	60	Bulky ut.(DUB)	96	
PCOD	52	Fibroid uterus	6	
Occult PCOD	24	Adenomyosis	3	

Table 6: Histology findings

Type of endometrium	No of cases	%
Proliferative	88	64.8%
Secretory	23	16.9%
Cystoglandular Hyperplasia	25	18.3%

DISCUSSION

Hypothyroidism is characterized by a broad spectrum of clinical features – many women are asymptomatic or have sub clinical hypothyroidism. Adolescent and reproductive age group are adversely affected. Thyroid dysfunction is incidentally diagnosed when investigated for infertility, obesity, PCOD, early ovarian failure and non responding menorrhagia. National

prevalence of thyroid dysfunction is 4% and sub clinical hypothyroidism is 15%.In India hypothyroidism is categorized under Iodine deficiency disorder.

A cross sectional study was done in OG department at SSSMC & RI. We have evaluated thyroid dysfunction in abnormal uterine bleeding and non responding cases of menorrhagia. 63.4% women had mennorhagia and hypothyroidism. 26.1% had oligomennorrhea and hypothyroidism. 104 women 74.3% were obese. 79 had menorrhagia, 90 had hypothyroidism, Less than 19 had oligomenorhoea, 96 women had DUB,(71.4%), 52 had PCOD(38.2%.)

Table :1 shows the prevalence of thyroid dysfunction in AUB woman who attended gynecology OPD. In our study 60.3% had thyroid dysfunction, out of which 71.3% had hypothyroidism, 9% hyperthyroidism and 22.4% subclinical hypothyroidism, 13 women were euthyroid. Padmaleela[(10)] from Andhra Pradesh has reported that thyroid dysfunction was seen;26.5% of woman who presented with AUB,18.17% suffered from hypothyroidism and 8.4% hyperthyroidism. Neelu Sharma[(11)] from Jammu Kashmir has reported 22% of her subjects with disturbed menstruation had hypothyroidism and 62% hyperthyroidism.

Age group and thyroid dysfunction is shown in table 2.in our study hypothyroidism was seen in 35% women in 18-25 age group, 25% in 26-35 age group; hyperthyroidism was seen in 9% women above 35 years. In Padmaleela's study[(10)] ,53% of women with AUB who had hypothyroidism belonged to 35-45 age group.31.3% in 25-35 year age ,75.7% in 15-24 year group. In our study hypothyroidism was more in younger age group where as padmaleela's group hypothyroidism was more in perimenopausal age group.

Table 3: shows menstrual pattern and thyroid dysfunction in 136 women with AUB. Hypothyroidism was seen in 63.4% women with menorrhagia, 26.19% with dysmenorrhea; 23 out of 30 subclinical hypothyroidism subjects had non responding menorrhagia.7 had PCOD. In Padmaleela's group 50% of hypothyroid women had menorrhagia and 20.2% oligo menorrhoea. Neelu Sharma[(11)] from Jammu Kashmir has shown 22% of her AUB subjects had hypothyroidism and 62% were hyperthyroid. Sangeetha Pahwa[(12)]'s 50% subjects with menorrhagia had hypothyroidism.19% had polymenorrhoea. Uma sinha[(13)]from Eastern India

,has reported 27.5% women with menstrual irregularity had goitre and 22.5% autoimmune thyroiditis which was not observed in our study.

Table 4: shows correlation between BMI, Menstrual pattern and Thyroid staus in 136 AUB women. Out of 136 women, 104 were Obese(74.26%) where BMI was between 20 - 35.Hypothyroidism was seen in 90 obese women(86.5%) and 29 had oligomenorrhoea(21.3%). Halo A. Aba[14] from Egypt has reported high prevalence of hypothyroidism in women with increased BMI and Obesity.These women are more prone for premature ovarian failure Halo A Aba's observation corresponds with ours, Indu Verma[15] from Punjab has reported that in her study 79% of asymptomatic Infertile women with Subclinical hypothyroidism and hyperprolactinaemia conceived with 3 months treatment with thyroid drugs. In our study 23 women with non responding menorrhagia and 7 with PCOD had subclinical hypothyroidism who responded to thyroid treatment .

USG findings in 136 women is shown in table 5.Bulky uterus in 96 women(70%),adenomyosis in 34(25%),PCOD IN 52,Occult PCOD in 24 and fibroid uterus in 6.Some had more than one pathology .Endometrial thickness was less than 6mm in 96 women(70%) and more than 6mm in 40(30%).

Table 6: Shows histology findings.88 women(64.8%) had proliferative Endometrium,23(16.9%) secretory ,25 (18.3%)cystoglandular hyperplasia.Endometrial study done by padmaleela[10] has reported 57.1% proliferative phase ,26.2% secretory phase and 13.3 % cystoglandular hyperplasia similar to our study observation.

CONCLUSION:

Thyroid dysfunction is associated with menstrual disturbances. Hence the prevalence of hypothyroidism is more than hyperthyroidism in women who present with obesity, PCOD, infertility, menorrhagia, subclinical thyroid dysfunction and occult PCOD. Women who presented with menorrhagia responded to thyroid treatment .In our study incidence of hypothyroidism 60.3% and subclinical thyroid dysfunction 22.4 % which is more than national prevalence. Our centre is within a radius of 40km from Nuclear Reactor at kalpakkam and surrounded by mountains. Routine screening for Thyroid Profile ,USG pelvis for uterine, ovarian morphology help in detecting thyroid dysfunction who present with Obesity, Infertility, PCOD and non responding menorrhagia and early ovarian failure.

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