



A STUDY OF ASSOCIATION OF THYROID DISORDERS IN PATIENTS WITH ABNORMAL UTERINE BLEEDING

Obstetrics And Gynaecology

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ABSTRACT

Introduction: The aim of the study was to determine the association between menstrual disturbances and thyroid dysfunction, to analyze the pattern of menstrual dysfunctions among women with thyroid disorder and to estimate the prevalence of subclinical thyroid diseases among women in the reproductive age group with abnormal uterine bleeding.

Materials And Methods: This was an observational study conducted in the department of Obstetrics and Gynaecology, Institute of Post Graduate Medical Education & Research, SSKM Hospital, Kolkata from March 2019 to August 2020. Inclusion criteria were patients attending OPD with age group of 18-45 years, women with any of the following menstrual disturbances- menorrhagia, oligomenorrhoea, hypomenorrhoea, polymenorrhoea, amenorrhoea with no pelvic pathology and USG showing normal uterus and ovaries.

Conclusion: From our study, it may be concluded that there is a strong correlation of thyroid dysfunction with abnormal uterine bleeding. In the patients with abnormal uterine bleeding, if thyroid disorders are timely diagnosed and treated, the menstrual irregularities settle, and unnecessary intervention like hormonal treatment and surgery like hysterectomy can be avoided. Since thyroid dysfunction is an important treatable cause of abnormal uterine bleeding, estimation of thyroid status should be a part of the battery of investigations being done in the patients of abnormal uterine bleeding.

KEYWORDS

Abnormal Uterine Bleeding, oligomenorrhoea, polymenorrhoea and metrorrhagia

INTRODUCTION

Abnormal Uterine Bleeding (AUB) is a term used to describe any type of bleeding that does not fall within the normal range for amount, duration, frequency and cyclicity¹. Whereas the term Dysfunctional Uterine Bleeding (DUB) is adopted in the absence of abnormal pathological cause². Clinically abnormal uterine bleeding may occur in many forms like menorrhagia, metrorrhagia, oligomenorrhoea, polymenorrhoea and hypomenorrhoea. Menstrual disorders pose a huge burden on gynaecological OPD accounting for approximately 20% of attendance³. It is recognized universally that menstrual disturbances may accompany and even may precede thyroid dysfunction⁴. Thyroid disorders are common all over the world and are 10 times more common in women than in men. Currently subclinical thyroid dysfunction is on the rising side than overt dysfunction. The aim of the study was to determine the association between menstrual disturbances and thyroid dysfunction, to analyze the pattern of menstrual dysfunctions among women with thyroid disorder and to estimate the prevalence of subclinical thyroid diseases among women in the reproductive age group with abnormal uterine bleeding.

MATERIALS AND METHODS

This was an observational study conducted in the department of Obstetrics and Gynaecology, Institute of Post Graduate Medical Education & Research, SSKM Hospital, Kolkata from March 2019 to August 2020. Inclusion criteria were patients attending OPD with age group of 18-45 years, women with any of the following menstrual disturbances- menorrhagia, oligomenorrhoea, hypomenorrhoea, polymenorrhoea, amenorrhoea with no pelvic pathology and USG showing normal uterus and ovaries. Exclusion criteria were presence of palpable pelvic pathology – Fibroids, polyp, cervical growth, history of bleeding diathesis and clotting abnormalities, patient on drug like aspirin, heparin, antithyroid agents and thyroxine, suspected pelvic inflammatory diseases, pregnancy associated bleeding and IUCD user. The patients were explained in simple language about the methodology of the trial. The patients who gave written consent were included in the study. Body mass index was calculated using height and weight. Systemic examination was carried out. Abdominal examination, per speculum and bimanual examination were done to rule out other causes of abnormal uterine bleeding. Investigations- complete blood count, platelet count, bleeding time, and clotting time, prothrombin time (PT), activated partial thromboplastin time

(APTT) serum TSH, free T3 and free T4 were carried out. USG lower abdomen and pelvis was done. Histopathological examination of endometrium performed by pipelle's curette. The patients were treated according to their symptoms.

Statistical Analysis Plan- For statistical analysis data were entered into a Microsoft excel spreadsheet and then analyzed by SPSS (version 27.0; SPSS Inc., Chicago, IL, USA) and GraphPad Prism version 5. Data had been summarized as mean and standard deviation for numerical variables and count and percentages for categorical variables. Two-sample t-tests for a difference in mean involved independent samples or unpaired samples. Paired t-tests were a form of blocking and had greater power than unpaired tests. One-way analysis of variance (one-way ANOVA) was a technique used to compare means of three or more samples for numerical data (using the F distribution). A chi-squared test (χ^2 test) was any statistical hypothesis test wherein the sampling distribution of the test statistic is a chi-squared distribution when the null hypothesis is true. Without other qualification, 'chi-squared test' often is used as short for Pearson's chi-squared test. Unpaired proportions were compared by Chi-square test or Fischer's exact test, as appropriate. P value was determined. P-value ≤ 0.05 was considered statistically significant.

RESULTS

Age, histopathology, number of parity and abortion showed no significant relationship with types of thyroid disorder. Type of menstrual disorder, BMI and presence of thyroid antibody showed significant relationship with the types of thyroid disorders. Menorrhagia was more commonly associated with hypothyroidism than hyperthyroidism. Hypothyroid patients showed to have more BMI than hyperthyroidism. Presence of thyroid antibody was found to be more in hyper than hypothyroidism.

Age in years	Hyperthyroidism (n=7)	Hypothyroidism (n= 34)	Normal TFT (n=59)	Total (n=100)	P value
21-25	2	2	6	10	0.1391
26-30	2	5	20	27	
31-35	1	17	17	35	
≥ 36	2	10	16	28	

Menstrual disorder					
Hypomenorrhoea	5	0	2	7	<0.0001
Menorrhagia	1	23	26	50	
Metrorrhagia	1	0	6	7	
Oligomenorrhoea	0	6	14	20	
Polymenorrhoea	0	5	11	16	
Histopathology					
Proliferative	3	20	24	47	0.2342
Secretory	4	14	35	53	
Parameters	Hyperthyroidism	Hypothyroidism	Normal	P value	
Parity (mean±SD)	2.0000±.5774	2.1471 ±.4357	2.1017 ±.5476	0.7746	
Abortion (mean±SD)	.4286 ±.5345	.2647 ±.4478	.3390 ±.4774	0.6280	
BMI (mean±SD)	27.9143 ±.7559	29.1706 ±.7289	27.9729 ±1.1598	<0.0001	
Thyroid antibody (mean±SD)	.7143 ±.4880	.4412 ±.5040	0	<0.0001	

DISCUSSION

In the present study, 35% women with AUB are in the age group 31-35 years, 27% women were between age group 26-30 years and 28% women age were ≥36 years which is correlating to Bhavani et al⁶ where 37% women were in the age group 31-40 yrs.

In the present study most of the cases belong to 2nd para(79%) and few are 3rd para(17%), primi para(2%), nullipara (2%), Pilli et al⁷ also reported that AUB was seen in 87% multipara.

In this study the most common type of AUB is menorrhagia(50%) followed by oligomenorrhoea(20%), polymenorrhoea(16%) which is correlating with Padmaleela et al⁸ where menorrhagia were 50%, oligomenorrhoea(18.2%), polymenorrhoea 27.3%.

We observed that 41 cases out of 100 were diagnosed with thyroid dysfunction, of which 34% hypothyroid, 7% is hyperthyroid and 59% is euthyroid. Neelu Sharma et al⁹ observed in their study that 22% cases were hypothyroid, 14% hyperthyroid and 64% were Euthyroid. Gowri et al¹⁰ observed 20.3% cases were hypothyroid, 4.7% hyperthyroid and 75% Euthyroid. Sangeeta Pahwa et al¹¹ observed 22% were hypothyroid, 2% hyperthyroid and 76% Euthyroid.

The mean BMI in hypothyroid group is 29.170 and in normal cohort 27.972. A significant association seen between BMI and thyroid dysfunction. (p<0.0001) Knudsen et al¹² and Mueller A et al¹³ have also found positive association between BMI and thyroid disorder.

In the present study, in hypothyroid patients on HPE, we found mostly proliferative endometrium(58.8%) followed by secretory endometrium (41.2%). In the study by Kaur et al⁵ 64.3% hypothyroid patients had proliferative endometrium, 21.4% patients had endometrial hyperplasia and 14.3% patients had secretory endometrium. Sharma et al⁹ observed in hypothyroid patients 36.36% had proliferative, 36.36% secretory and 27.27% atrophic endometrium.

CONCLUSION

From our study, it may be concluded that there is a strong correlation of thyroid dysfunction with abnormal uterine bleeding. In the patients with abnormal uterine bleeding, if thyroid disorders are timely diagnosed and treated, the menstrual irregularities settle, and unnecessary intervention like hormonal treatment and surgery like hysterectomy can be avoided. Since thyroid dysfunction is an important treatable cause of abnormal uterine bleeding, estimation of thyroid status should be a part of the battery of investigations being done in the patients of abnormal uterine bleeding.

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