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PREGNANCY OUTCOME IN THYROID DISORDERS

Dr. Nanda Y. Vinayak (Asscoiate Professor OBGY, DMMS)* and Dr. Mrunal Nakade (JR OBGY, DMMS)

Department of OBGY, Datta Meghe Medical College, Wanadongri, Nagpur.

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***Corresponding Author**
Dr. Nanda Y. Vinayak
Asscoiate Professor,
Department of OBGY, Datta Meghe Medical College,
Wanadongri, Nagpur.

ABSTRACT

The incidence of thyroid dysfunctions has increased in the last decade. It has been found that there is a definite co-relation between sub-clinical hypothyroidism and premature delivery, and sub-clinical hyperthyroidism and placental abruption. Patients with thyroid dysfunctions, if not treated well develop pregnancy complications like pre-eclampsia, preterm delivery, placental abruption and neonatal complications. The aim of this paper is to evaluate the pregnancy outcome in women with thyroid disorders. This is done by mandatory screening of all pregnant women for thyroid disorders and by treating such women, in collaboration with a physician. Practical evaluation was done by screening 100 pregnant women for thyroid dysfunction. We maintain that mandatory and early screening should be done to avoid any pregnancy complications.

KEYWORDS: Thyroid hormone, Pregnancy, Investigation.

INTRODUCTION

All over the world, thyroid dysfunction has become very common, next to diabetes. It has been found that the percentage of hypothyroidism has increased significantly in people. In spite of having hypothyroidism, Indian women do not seek medical help. Therefore, it is very important to screen all the pregnant women for thyroid disorder in their first visit to the doctor.

Thyroid dysfunctions like hypothyroidism, thyrotoxicosis and thyroid nodules may develop during pregnancy. These may lead to the following- abortion, placental abruptions, pre-eclampsia, preterm delivery and reduced IQ in the child of the woman. Epidemiological data have shown the significant role of maternal thyroid hormone in fetal neurologic

development and maternal health.[1] The main events occurring during pregnancy are: a marked increase in serum thyroxine-binding globulin levels; a marginal decrease in free hormone concentrations (in iodine-sufficient conditions) that is significantly amplified when there is iodine restriction or overt iodine deficiency; a frequent trend toward a slight increase in basal thyrotropin (TSH) values between the first trimester and term; a direct stimulation of the maternal thyroid gland by elevated levels of human chorionic gonadotropin (hCG), which occurs mainly near the end of the first trimester and can be associated with a transient lowering in serum TSH; and finally, modifications of the peripheral metabolism of maternal thyroid hormones.[1] Early diagnosis for thyroid disorders of pregnant women and treatment of thyroid disorders during pregnancy is vital and cost reducing to avoid both fetal and maternal complications secondary to thyroid dysfunction.

Thyroid disorders are common. The prevalence of hyperthyroidism is around 5 per 1000 in women and overt hypothyroidism about 3 per 1000 in women. Subclinical hypothyroidism has a prevalence in child bearing age women in iodine sufficient areas of between 4% and 8%.[3] The conditions are much more common in women, so we expect that they will appear during pregnancy. Since the last decade, there has been an increase in the incidence of thyroid dysfunction during pregnancy. As a result, the adverse effects on maternal and fetal developments has also increased. With a view to end these adverse effects, the proposal to implement screening for thyroid function during pregnancy needs consideration.

The present study was done with the objective to evaluate pregnancy outcome in patients with thyroid dysfunctions, treat such patients and screen all pregnant women for thyroid disorders. It is clear that carrying out screening for thyroid dysfunctions in all women who are pregnant or who want to have pregnancy is essential.

Aim

To evaluate pregnancy outcome in women with thyroid disorders.

Objectives

1. Mandatory screening of all pregnant women for thyroid disorders.
2. To treat women with thyroid disorders, in collaboration with a physician.

METHOD

Women who fulfilled our criteria attended the department of Obstetrics and Gynaecology, at Datta Meghe Medical College, Wanadongri, Nagpur were included in the study. 100 patients were enrolled as cases for study and consent was taken. The patients were subjected to thyroid screening.

Sample Size

100 pregnant women were screened at Gynaecology OPD from June 2019 to March 2020.

Setting

The study was conducted in Department of Obstetrics and Gynaecology in Datta Meghe Medical College and Hospital, Wanadongri, Nagpur.

Design

Thyroid dysfunction study in pregnant women.

Study period - 10 months.

Informed consent was included for the women who fulfilled the inclusion criteria and enrolled in the study.

Inclusion criteria

Pregnant women in the age group from 18-40 years, irrespective of Gravida and their socio-economic status.

Exclusion Criteria

Pregnant women in the age group from 18-40 years who are known cases of medical disorders other than thyroid disorders.

STATISTICAL ANALYSIS

Statistical analysis was done by using descriptive and inferential statistics using sensitivity and specificity.

RESULTS

Table 1: Distribution of pregnant women who visited the hospital, trimester-wise.

Trimester	No. of pregnant women	Percentage
Reported to the hospital in first trimester	78	78
Reported to the hospital in second trimester	22	22
Total	100	100.00

Table 2: Distribution of pregnant women according to thyroid profile report.

Thyroid Profile	No. of pregnant women	Percentage
TSH > 5.5	14	14
TSH < 0.35	4	4
TSH (0.35-5.5)	82	82
Total	100	100.00

Table 3: Symptom-wise distribution of affected pregnant women.

Symptoms	No. of pregnant women	Percentage
Suggestive of thyroid disorders	27	27
No symptoms of thyroid disorders	73	73
Total	100	100.00

Table 4: Distribution of pregnant women with sub-clinical hypothyroidism and hyperthyroidism.

Sub-clinical thyroid dysfunctions	No. of pregnant women	Percentage
Sub-clinical hypothyroidism	5	5
Sub-clinical hyperthyroidism	2	2
Total	7	7.00

Table 5: Distribution of pregnant women with complications.

Patients having complications	No. of pregnant women	Percentage
Pre-term labour	6	6
Pre-eclampsia	1	1
Placental abruption	2	2
Total	9	9

FINDINGS

During this study period, when screening for thyroid dysfunctions was done in the first trimester of pregnancy in women, if found to have deranged values, patients were treated accordingly. If the patients were regular in taking their treatment and clinical and bio-chemical examination, they did not develop any complications during labour or in the neonate. Patients who visited us for the first time in their late pregnancy with complications like pre-term labour, pre-eclampsia or placental abruption were investigated. When other causes for these complications were ruled out, these patients were found to have either sub-clinical hyperthyroidism/hypothyroidism or hyperthyroidism/ hypothyroidism.

CONCLUSION

As can be seen from the above study, as many as 22% of the pregnant women do not report in their first trimester. And these are the patients who are more prone to develop pregnancy complications due to thyroid dysfunction. Subclinical hypothyroidism leads to preterm delivery. Subclinical hyperthyroidism may also be associated in adverse pregnancy outcome like placental abruption. Thyroid dysfunctions, like hypothyroidism and hyperthyroidism, definitely have adverse effects on healthy pregnancy outcomes. So, it is advisable and mandatory to screen all the patients for thyroid dysfunction in the first antenatal visit.

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