



A CLINICAL STUDY ON HYPOTHYROIDISM IN PREGNANCY

Obstetrics & Gynaecology

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ABSTRACT

Aim: To study the prevalence of hypothyroidism and its outcomes in pregnancy. **Study Design:** Retrospective study. **Period Of Study:** 1 year. **Materials And Methods:** Out of 826 deliveries for one year i.e from jan 2021 to dec 2021, 105 cases are of hypothyroidism, Details like age, socioeconomic status, antenatal course, booked or unbooked, previous obstetric history, preconceptional hypothyroidism, any hypertension, IUGR, oligohydramnios in present pregnancy are noted. **Conclusion:** Adequate treatment of hypothyroidism reduces certain complications like miscarriages, preeclampsia, IUGR, oligohydramnios, glucose intolerance, preterm labour, low birth weight, abruptio placenta, still birth and postpartum depression.

KEYWORDS

hypothyroidism, preeclampsia, IUGR, oligohydramnios.

INTRODUCTION

Hypothyroidism during pregnancy has an adverse effect on both mother and child. Children born to untreated or undertreated mothers have profound effect on future intellectual development. [1] Pregnancy has a profound physiological impact on the thyroid gland and thyroid function. During pregnancy, the thyroid gland increases in size by 10% in iodine sufficient countries and to a greater extent in iodine deficiency countries.

Production of thyroid hormones and iodine requirement both increases by approximately 50% during pregnancy as part of physiology. In addition, pregnancy is a stressful condition for the thyroid gland resulting in hypothyroidism in women with limited thyroid reserve or iodine deficiency.

The definitions of both overt and subclinical thyroid dysfunction have changed considerably over the past few years, as new data indicate that the commonly used fixed upper limits of 2.5 mU/l or 3.0 mU/l for thyroid-stimulating hormone (TSH) are too low to define an abnormal thyroid function.

The prevalence of hypothyroidism during pregnancy is estimated to be 0.3–0.5% for overt hypothyroidism and 2–3% for subclinical hypothyroidism. [2]

Autoimmune thyroiditis is the commonest cause of hypothyroidism during pregnancy. Other causes include radioiodine ablation of thyroid while treating hyperthyroidism or thyroid cancer, surgery of the thyroid tumors and rarely, central hypothyroidism including lymphocytic hypophysitis or ectopic thyroid and drugs like Rifampicin and phenytoin which accelerate thyroid metabolism. However, worldwide, iodine deficiency still remains one of the leading causes of hypothyroidism, both overt and subclinical.

Women with hypothyroidism have decreased fertility; even if they conceive, risk of abortion is increased, and risk of gestational hypertension, anemia, abruptio placenta and postpartum hemorrhage is increased. The risk of these complications is greater in women with overt, rather than subclinical hypothyroidism. Untreated maternal hypothyroidism can lead to preterm birth, low birth weight, and respiratory distress in the neonate.

Data from recently published studies have underscored the association between miscarriage and preterm delivery in women with normal thyroid function who test positive for thyroid peroxidase (TPO) antibodies.

Prenatal and postnatal adverse effects including attention deficit and hyperactivity syndrome have been reported in children born to hypothyroid mothers. [3,4]

During the first trimester, approximately 1 in 10 pregnant women develop antibodies to TPO or thyroglobulin and hypothyroidism

develops in roughly 16% of these women. The prevalence of hypothyroidism in pregnancy is around 2.5% according to the Western literature. There are a few reports of prevalence of hypothyroidism during pregnancy from India with prevalence rates ranging from 4.8% to 11%.

AIM:

To study the prevalence of hypothyroidism in pregnancy and its outcome

MATERIALS AND METHODS:

We made a study on 105 cases of hypothyroidism Out of 826 deliveries for one year. All the case sheets are collected from MRD and are analysed, details are noted like, age group, socio economic status, antenatal course, booked or unbooked, previous obstetric history, preconceptional hypothyroidism and its medical or surgical management, any hypertension, oligohydramnios and IUGR in present pregnancy

Design Of Study: Retrospective study

Period Of Study: 1 Year from Jan 2021 to Dec 2021

After taking permission from ethics committee of our Hospital, I started my study.

RESULTS:

In my study group, prevalence of hypothyroidism is 12.7%. I found out that inadequately treated hypothyroid pregnant women a significant increase in the incidence of abortion or fetal growth restriction and also 3 fold higher risk of developing preeclampsia, And also Oligohydramnios. One case of placental abruption was present.

Obstetric score	Study	Control
Primis	46	292
Multi with previous normal delivery	23	185
Multi with pre LSCS	36	244
Total	105	721
Period of gestation	Study	
Pre conceptional	19	
< 10-12wks	40	
>12wks	46	
Total	105	
Age group	NO	
< 20	18	
20-30	64	
30-40	23	
Total	105	

DISCUSSION:

- We have studied about 105 cases during a span of 1 year
- In my study group, prevalence of hypothyroidism is 12.7% in women delivered at our hospital
- 56 cases delivered vaginally

- 42 cases delivered without any complications
- No case was found with miscarriage, still birth, postpartum depression in my study
- Fetal growth restriction found in 22 cases that accounts for 21%
- Pre-eclampsia found in 16 cases, 15%
- Oligohydramnios found in 24 cases, 23%
- Preterm labor in 18 cases, 17%
- Abruptio Placenta in 2 cases, 1%.

Adequate treatment of hypothyroidism in pregnancy significantly reduces certain complications like miscarriage, pre-eclampsia, IUGR, oligohydramnios, glucose intolerance, preterm labor, low birth weight babies, abruptio placentae and stillbirth, postpartum depression

CONCLUSION:

- Treatment of maternal hypothyroidism is essential, because adverse outcomes for both mother and baby are greatly reduced.
- Even when treatment is initiated later in pregnancy or is insufficient to restore a euthyroid state, the babies of treated mothers will show more normal neurodevelopment than the babies of non-treated mothers

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