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Obstetric Outcomes in Pregnancy with Hypothyroidism

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Abstract: ***Background: Hypothyroidism during pregnancy is associated with adverse maternal and fetal outcomes. This study evaluates the impact of overt hypothyroidism on obstetric outcomes in pregnant women. Methods: This prospective study screened all antenatal women during the first trimester using TSH levels. Those diagnosed with overt hypothyroidism were treated with levothyroxine and monitored through serial TSH measurements. Outcomes were compared between well-controlled and poorly controlled hypothyroid groups. Results: Poorly controlled hypothyroidism was associated with higher rates of miscarriage, placental abruption, oligohydramnios, intrauterine growth restriction (IUGR), preeclampsia, and low birth weight. Effective management reduced these risks significantly. Conclusion: Early diagnosis and appropriate management of hypothyroidism significantly improve obstetric outcomes. Universal thyroid screening in early pregnancy is recommended.***

Keywords: Overt hypothyroidism, pregnancy, obstetric outcomes, maternal complications, fetal complications, TSH

1. Introduction

Thyroid hormones are essential for maternal metabolism, placental development, and fetal neurodevelopment. Pregnancy induces significant changes in thyroid physiology, increasing the demand for hormones. Untreated hypothyroidism can lead to complications including miscarriage, preeclampsia, preterm labor, and impaired neurodevelopment. India shows a higher prevalence of maternal hypothyroidism, necessitating region-specific data to guide clinical interventions.

2. Materials and Methods

All antenatal women were screened in the first trimester using serum TSH. Women with elevated TSH underwent FT4 testing. Only overt hypothyroid cases (elevated TSH, low FT4) were included. These women received levothyroxine and were monitored at 16, 20, and 32 weeks. Outcomes were categorized based on TSH control (well vs. poorly controlled).

3. Results

Out of the screened women, those with poorly controlled hypothyroidism had a significantly higher incidence of miscarriage, placental abruption (4 cases), oligohydramnios, and IUGR. Controlled hypothyroidism correlated with reduced rates of complications including glucose intolerance, low birth weight, and preterm labor.

4. Discussion

This study reaffirms the detrimental impact of uncontrolled hypothyroidism on pregnancy. Maternal hypothyroidism impairs vascular and placental development, leading to complications. Levothyroxine therapy improved outcomes when TSH was adequately controlled. The results support universal screening and trimester-specific TSH targets.

5. Conclusion

Thyroid dysfunction in pregnancy increases maternal and fetal risks. Early detection and proper levothyroxine therapy significantly improve outcomes. Universal thyroid screening in early pregnancy should be implemented.

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