

To Corelate Thyroid Dysfunction in Pregnancy with Preterm Labor

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Abstract : INTRODUCTION: Maternal Hypothyroidism is the most frequent endocrine disorder in pregnancy and varies from 2.5% in the west to 11.0% in India. Maternal Hypothyroidism can have detrimental maternal effects like increased risk of preterm labor, PPROM leading to increased maternal morbidity and also on the neonate in the form of prematurity and its complications, prolonged hospital stay, neurological developmental problems, delayed milestones and mental retardation etc. Henceforth, the study was planned to evaluate the role of Hypothyroidism in preterm labor and its effect on neonates. AIMS AND OBJECTIVES: To Correlate Overt Hypothyroidism, Subclinical Hypothyroidism and Isolated Hypothyroxinemia With Preterm Labor and the neonatal outcome. Material and Methods: A case-control study of singleton pregnancy was performed over a year, in which a total of 500 patients presenting in the emergency with preterm labor were enrolled. The thyroid profile of these patients was sent at the time of admission, on the basis of which they were divided into Cases - Hypothyroidic mothers and Controls - Euthyroid mothers. The cases were further divided into subclinical, overt Hypothyroidism and isolated hypothyroxinemia. The neonatal outcome of these groups was also compared on the basis of the incidence and severity of neonatal morbidity, neonatal respiratory distress, the incidence of neonatal Hypothyroidism and early complications. The fetomaternal data was collected and analysed. RESULTS: In the study, a total of 500 antenatal patients with a history of preterm labor were enrolled, out of which 67 (13.8%) patients were found to be hypothyroid. The majority of the mothers had Subclinical Hypothyroidism (12.2%), followed by Overt Hypothyroidism seen in 1% of the mothers and isolated hypothyroxinemia in 0.6% of cases. The neonates of hypothyroid mothers had higher levels of cord blood TSH, and the mean cord blood TSH levels were highest in the case of neonates of mothers with Overt Hypothyroidism. The need for resuscitation of the neonates at the time of birth was higher in the case of neonates of hypothyroid mothers, especially with Subclinical Hypothyroidism. Also, it was found that the requirement of oxygen therapy in the form of oxygen by nasal prongs, oxygen by a hood, CPAP, CPAP along with surfactant therapy and mechanical ventilation along with surfactant therapy was significantly higher in the case of neonates of hypothyroid mothers. CONCLUSION: The results of our study imply that uncontrolled and untreated maternal Hypothyroidism may also lead to preterm delivery. The neonates of mothers with Hypothyroidism have higher cord blood TSH levels. The study also shows that there is an increased incidence and severity of respiratory distress in the neonates of hypothyroid mothers with untreated subclinical Hypothyroidism. Hence, we propose that routine screening for thyroid dysfunction in pregnant women should be done to prevent thyroid-related fetomaternal complications.

Keywords : high-risk pregnancy, thyroid, dysfunction, hypothyroidism, Preterm labor

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