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STUDY OF HYPOTHYROIDISM COMPLICATING PREGNANCY AND ITS MATERNAL AND FETAL OUTCOME

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ABSTRACT

AIMS AND OBJECTIVES:

1. To study occurrence of hypothyroidism in our hospital.
2. To study the maternal and fetal outcome in pregnant women diagnosed with hypothyroidism.

MATERIALS AND METHODS: It was a retrospective study from January 2018 to December 2018 conducted at Department of Obstetrics and Gynaecology in Mamata general hospital Khammam. The demographic data and other relevant data collected from past records and was analysed with a sample size of 50. Apart from the routine obstetrical investigations, TSH was done as a screening test. Cut off values for TSH as per American Thyroid Association - 1st trimester: 0.1 -2.5 micro iu/L, 2nd trimester: 0.2-3.0 micro iu/L, 3rd trimester: 0.3 -3 micro iu/L. Those with the abnormal tests were categorized as Subclinical hypothyroid (Normal FT4 with high TSH), Overt hypothyroidism (Low FT4 with high TSH)

RESULTS: In the present study, most common obstetric complication observed was preeclampsia (26%) followed by gestational diabetes (16%) and most common fetal complication was preterm delivery (37.5%).

CONCLUSION: In view of the high prevalence of the thyroid dysfunctions and its association with different adverse pregnancy related complications, routine screening and adequate treatment is important to prevent adverse maternal and fetal outcomes.

KEYWORDS : Preeclampsia, Gestational Diabetes , Preterm Delivery, Hypothyroidism

INTRODUCTION

Thyroid disorders are the second most common cause of endocrine dysfunction in the women of child bearing age after diabetes mellitus[1].Development of maternal thyroid disorders during early pregnancy can influence the pregnancy outcome and fetal develo pment. The adverse pregnancy outcome includes miscarriage, pregnancy induced hypertension and its most severe form preecl ampsia, placental abruption, anaemia post partum haemorrhage, preterm delivery , low birth weight and increased perinatal and neonatal morbidity and mortality.

MATERIALS AND METHODS:

- It was a retrospective study done in the department of obstetrics and gynaecology at Mamata General hospital, Khammam from January 2018 to December 2018. The demographic data and other relevant data collected from past records and was analysed with a sample size of 50.
- Apart from the routine obstetrical investigations, TSH was done as a screening test. Cut off values for TSH as per American Thyroid Association - 1st trimester: 0.1 -2.5 micro iu/L, 2nd trimester: 0.2-3.0 micro iu/L, 3rd trimester: 0.3 -3 micro iu/L. Those with the abnormal tests were categorized as Subclinical hypothyroid (Normal FT4 with high TSH), Overt hypothyroidism (Low FT4 with high TSH)

RESULTS :

Out of the 50 women included in the study majority of the women ie 50% were in the age group of 18-24 yrs . There was a relatively higher incidence of multigravida i.e 58% when compared to primigravida. Based on serum T3 , T4 ,TSH levels at the time of diagnosis majority of the women had subclinical hypothyroidism i.e 80% when compared to 20% having overt hypothyroidism. The major risk factor in the women was pre-eclampsia which was about 26% , followed by gestational diabetes in 16% , about 8% of the women were not associated with any complications. Mode of delivery was emergency caesarian section done in 44% of the women followed by spontaneous vaginal delivery in 38% . The reason behind indication of termination of pregnancy in the women was previous caesarian section seen in 25.8% followed by abnormal Doppler in 22.58% of the women . Based on fetal outcome as per birth weight about 58% had normal birth weight and low birth weight was seen in 21 fetus i.e 42% . Based on APGAR Score 14(28%) babies had APGAR score less than 6 where as 36(72%) babies had APGAR scoregreater than 6. The main reason behind NICU admi ssions were preterm delivery seen in 37.5% followed by IUGR seen in 33.3% cases.

TABLE 1: based on fetal outcome

OUTCOME	Number%
Term	27(54%)
Preterm	18(36%)
IUD	3(6%)
Early neonatal death	2(4%)
Total	50(100%)

DISCUSSION

- In the present study 25 (50%) belongs to age group of 18-24 years followed by 20 cases (40%) belongs to 25-30 years age group with a mean age group of 24 years comparable to Nidhi et al which was 25years[2].
- Total number of primigravida women are 21 and multigravida are 29 which is comparable to Dhara et al and jyanti et al [3,4].
- Total number of overt hypothyroid patients were 10 (20%) and subclinical hypothyroidism was 40 (80%). This is because of much higher incidence subclinical hypothyroidism than overt hypothyroidism which is comparable with Sharma D et al[5]
- Based on maternal complications majority of the pregnant women presented with pre eclampsia (26%) , followed by gestational diabetes (16%). Around 2% women presented with abruption and eclampsia which was compared with Dhara et al[3].
- Among 50 hypothyroid pregnant women ,24 delivered vaginally and 26 underwent caesarean section of which 22 were emergency LSCS which was comparable with mahendra et al[6].
- The major indication for termination of pregnancy in my study was previous LSCS (25.8%) followed by Abnormal Doppler (22.58%)
- Based on birth weight baby born with low birth weight were 21(42%) which were comparable with Nidhi et al and jyanti et al [2,4].
- Based on APGAR Score 14(28%) babies had APGAR score less than 6 where as36(72%) babies had APGAR score greater than 6 which was comparable with Sharma D et al[5].
- 24 (48%) babies got admitted in NICU and most common reason was Preterm around9(37.5%) followed by IUGR about 8 (33.3%) which was comparable to Nidhi et al[2]

CONCLUSION:

- Thyroid disorders in pregnancy have adverse effects on maternal and fetal outcome emphasizing the importance of routine antenatal thyroid screening .
- As fetus needs thyroxine for brain development, growth, and lung maturation, adequate replacement therapy should be done to keep TSH with in trimester specific reference ranges.
- Early and effective treatment of thyroid disorders ensures safe pregnancy with minimal maternal and fetal complications.

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