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Thyrotoxicosis in Pregnancy

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Abstract
Thyrotoxicosis in pregnancy is rare. It is important to consider during pregnancy because uncontrolled thyrotoxicosis has increased risk to mother and foetus. Most common cause of Maternal thyrotoxicosis during pregnancy is Graves' disease. Other causes include gestational thyrotoxicosis, Multinodular goitre, Toxic adenoma and others.Early diagnosis and treatment should be given in order to prevent complications and ensure safe delivery and healthy baby.

Keywords: *Thyrotoxicosis, Graves' disease, Goitre, Gestational thyrotoxicosis, Preterm labour.*

Introduction

Thyrotoxicosis during pregnancy can pose serious maternal as well as foetal health hazards. Prevalence of thyrotoxicosis in pregnancy is about 0.2%. Graves' disease being the most common cause. Uncontrolled thyrotoxicosis causes both maternal and foetal complications including miscarriage, higher incidence of toxemia, heart failure, placental abruption, preterm delivery, premature labor and fetal complications like small, for gestational age, intrauterine growth retardation and low birth weight. Proper treatment of the disease can prevent potential adverse effects on mother and baby.

Materials and Methods

It is a limited retrospective study. We collected the case papers of patients treated by endocrinology unit of medicine department in Goa medical college, who have been diagnosed as thyrotoxicosis in pregnancy. Study period was 2009-2017. A total of 73 patients with the diagnosis of Pregnancy with thyrotoxicosis were registered in our records. We managed to get the correct contact numbers of around 60 of them. Only 43 responded to our telephonic calls and were willing to participate in in our study.

We went through the case papers to find out the details of clinical symptoms, course of the disease, treatment received, complications during the pregnancy (both maternal and fetal).

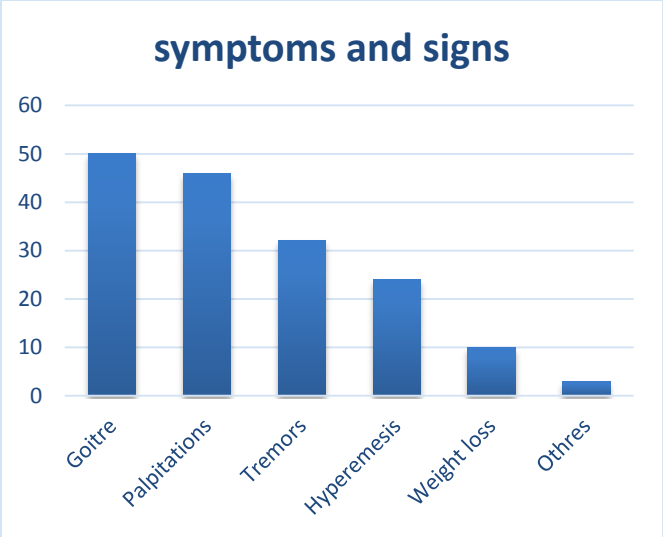
Observations and Results

Median age of study population 29 years. 67% were primigravida. 33% were multigravida.33% had history of previous thyroid disease.

Goiter and palpitations were the most common presenting symptoms followed by hyperemesis, tremors.

About 45% of patients were diagnosed with Graves' disease and 55% had gestational thyrotoxicosis. 72% were on treatment. 50% were treated with neomercazole. Maximum dose used was 40 mg per day. 22% were treated with propylthiouracil. Maximum dose used was 300mg per day.

Mean age of gestation at delivery 37.6 weeks Mean birth weight was 2.59kg. 11% had preterm delivery. One patient developed gestational hypertension. One baby had hypothyroidism.



Trimester	First trimester	Second trimester	Third trimester
T3 (ng/dl)	200.36	202	149
T4 (µg/dl)	14.9	12.0	10.53
TSH (µIU/ml)	0.02	0.45	0.801
Free T3 (pg/l)	4.41	3.0	2.8
Free T4 (ng/l)	1.8	1.2	1.0

Discussion

Thyrotoxicosis has been known to cause an array of complications when associated with pregnancy[2]. The maternal complications include miscarriage, increased risk of pre-eclampsia, placental abruption, preterm delivery, premature labor and heart failure.Foetal complications include small for gestational age, intrauterine growth retardation, low birth weight and prematurity. Rare cases of foetal goitre and transient neonatal hypothyroidism occurred in infants of mothers who have been over treated with anti-thyroidal drugs.

In our study, 50% of patients had goiter. This was comparable to study done by Vimal Nambiar et al (52%)[3]. Mean age of population in our study is higher (29 years) when compared to study done by Vimal Nambiar et al[3] (25.19).

In our study 67% were primi gravida, 33% were multigravida whereas it was 44% and 56% respectively in Murty N et al[5].

MeanTSH in our study is 0.02µIU/ml in first trimister as compared to 0.036µIU/ml in study done by saraladevi et al.[4] and <0.02µIU/ml in study done by Murty N et al[5].

11% had preterm delivery as compared to 5.5% in study done by saraladevi et al.[4]

Conclusions

Overall thyrotoxicosis has significant effects on both mother and foetus. Early diagnosis and treatment should be given in order to prevent complications and ensure safe delivery and healthy baby.

Limitations

We included only patients with thyrotoxicosis in our study, hence overall prevalence could not be calculated. Small study population was another drawback of our study. Also, few patients lost for follow up.

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