

Outcomes of Pregnancy in Women with TPO Positive Status after Appropriate Dose Adjustments of Thyroxin: A Prospective Cohort Study

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Abstract : This study aimed to analyse the pregnancy outcomes in patients with TPO positivity after appropriate L-Thyroxin supplementation with close surveillance. All pregnant women attending the antenatal clinic at Milann-The Fertility Center, Bangalore, India- from Aug 2013 to Oct 2014 whose booking TSH was more than 2.5 mIU/L were included along with those pregnant women with prior hypothyroidism who were TPO positive. Those with TPO positive status were vigorously managed with appropriate thyroxin supplementation and the doses were readjusted every 3 to 4 weeks until delivery. Women with recurrent pregnancy loss were also tested for TPO positivity and if tested positive, were monitored serially with TSH and fT4 levels every 3 to 4 weeks and appropriately supplemented with thyroxin when the levels fluctuated. The testing was done after an informed consent in all these women. The statistical software namely SAS 9.2, SPSS 15.0, Stata 10.1, MedCalc 9.0.1, Systat 12.0 and R environment ver.2.11.1 were used for the analysis of the data. 460 pregnant women were screened for thyroid dysfunction at booking of which 52% were hypothyroid. Majority of them (31.08%) were subclinically hypothyroid and the remaining were overt. 25% of the total no. of patients screened were TPO positive. The various pregnancy complications that were observed in the TPO positive women were gestational glucose intolerance [60%], threatened abortion [21%], midtrimester abortion [4.3%], premature rupture of membranes [4.3%], cervical funneling [4.3%] and fetal growth restriction [3.5%]. 95.6% of the patients who followed up till the end delivered beyond 30 weeks. 42.6% of these patients had previous history of recurrent abortions or adverse obstetric outcome and 21.7% of the delivered babies required NICU admission. Obstetric outcomes in our study in terms of midtrimester abortions, placental abruption, and preterm delivery improved for the better after close monitoring of the thyroid hormone [TSH and fT4] levels every 3 to 4 weeks with appropriate dose adjustment throughout pregnancy. Euthyroid women with TPO positive status enrolled in the study incidentally were those with recurrent abortions/infertility and required thyroxin supplements due to elevated Thyroid hormone (TSH, fT4) levels during the course of their pregnancy. Significant associations were found with age>30 years and Hyperhomocysteinemia [p=0.017], recurrent pregnancy loss or previous adverse obstetric outcomes [p=0.067] and APLA [p=0.029]. TPO antibody levels >600 IU/ml were significantly associated with development of gestational hypertension [p=0.041] and fetal growth restriction [p=0.082]. Euthyroid women with TPO positivity were also screened periodically to counter fluctuations of the thyroid hormone levels with appropriate thyroxin supplementation. Thus, early identification along with aggressive management of thyroid dysfunction and stratification of these patients based on their TPO status with appropriate thyroxin supplementation beginning in the first trimester will aid risk modulation and also help avert complications.

Keywords : TPO antibody, subclinical hypothyroidism, anti nuclear antibody, thyroxin

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