

## Original Paper

### Thyroid function and autoimmunity derangement in goiterous and non-goiterous pregnant women

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## Abstract

**Background and Objective:** Destructive effects of thyroid diseases in pregnancy and fetal growth is well established subclinical autoimmune thyroid diseases can double the rate of preterm labor, abortion and postpartum thyroiditis. This study was done to compare thyroid function and autoimmunity derangement in goiterous and non-goiterous pregnant women.

**Materials and Methods:** This case – control study was done on 100 healthy and 100 goiterous pregnant women in Dezyani hospital located in Gorgan, Northern Iran during 2005. Five milliliter of blood sample was obtained from each subject to measure thyroid hormones concentration including T3/ T4/ TSH/ T3 RUP and thyroid autoantibodies (Anti Tg/Anti TPO). Thyroid hormone and auto antibodies were measured using IRMA and ELISA techniques.

**Results:** Thyroid volume was enlarged twice and triple of its original size in 34% and 66% goiterous pregnant women respectively. Mean serum TSH in cases and controls were 1.81+/-1.33 microU/ml and 1.84+/-1.4 microU/ml respectively. The mean of Anti TPO and Anti Tg in cases were 373.91+/-197.36 U/ml and 248.80+/-70.59 U/ml respectively. The same indices for controls were 79.52+/-63.99 U/ml and 248.80+/-70.59 U/ml respectively. In pregnant women with goiter 36% had high Anti TPO and 9% had high Anti Tg, but in control group 16% and 4% of controls had elevated Anti TPO and Anti Tg, respectively.

**Conclusion:** According to thyroid function tests there were elevation of antibody in 20% of the healthy subjects and 45% of the goiterous subjects, therefore it is advisable to measure thyroid function tests accompanied with thyroid antibodies in all pregnant women either with or without goiter in order to prevent fetomaternal disorders.

**Keywords:** Thyroid, Autoimmunity, Pregnancy, Gorgan, Iran

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