



# Autoimmunity as a cause of goiter, obesity and miscarriage in north of Iran, an iodine sufficient area.



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## Objectives :

The thyroid gland plays an important role in metabolism of human body. Abnormal growth of this gland is called Goiter. Iodine deficiency was thought to be the main cause of goiter. However, despite years of salt iodization, goiter continues to be a major public health, worldwide. As the thyroid gland is the most common organ affected by autoimmune diseases, it is suggested that autoimmunity can disturb thyroid function and develop to goiter. This study tries to investigate the relationship between goiter and Anti-TPO as a marker of autoimmunity.



Figure 1 – Gorgan is located on the South coast of Caspian Sea

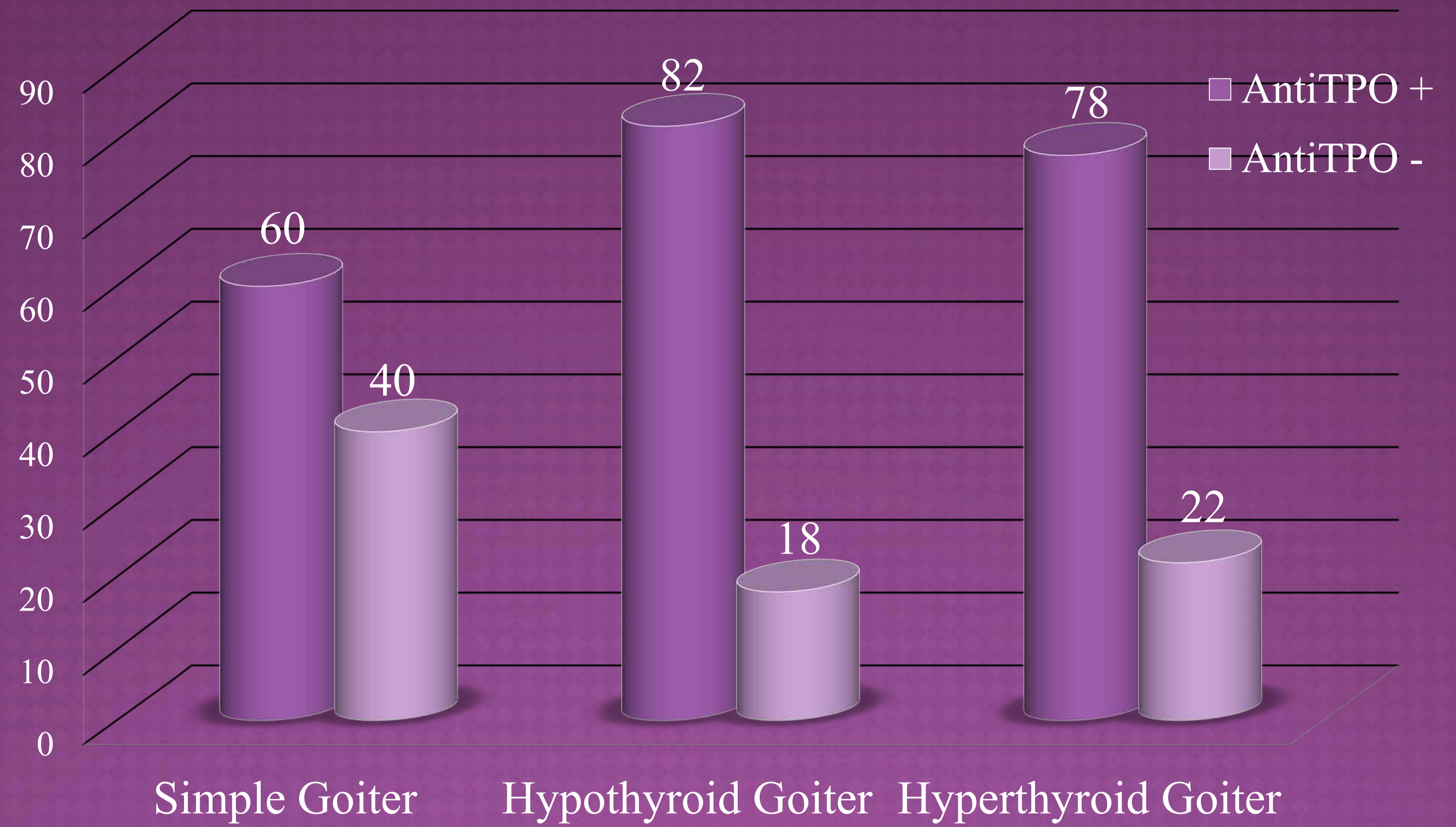


Chart 1- Autoimmunity Status in different types of Goiter

**Method:** In this cross-sectional study 150 goiter patients who were referred to endocrinology clinic of Gorgan, Iran were observed. Thyroid function tests (T3, T4, and TSH) and Anti TPO were investigated in all patients. BMI was also calculated by measurement of height and weight.

**Results:** In general, 132 women and 18 men were studied. There were 50 simple goiters, 50 hypothyroid and 50 hyperthyroid patients. Overall, 110 patients had positive and 40 Patients had Negative Anti-TPO. Anti-TPO positive patients were significantly higher in Hypothyroid and Hyperthyroid groups in comparison with simple goiter patients (P Value <0.05), while there was no significant difference between Hypothyroid and Hyperthyroid groups. The average of BMI in Anti-TPO positive patients was significantly higher. Women with positive Anti-TPO had also a higher rate of miscarriage.

**Conclusion:** In iodine sufficient areas, autoimmunity can affect thyroid function and can be a major cause of goiter. Autoimmunity can also be an important cause of obesity and miscarriage.