

# Thyroid autoimmunity at the onset of type 1 diabetes mellitus in children

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## ABSTRACT

**Introduction:** Studies that have investigated autoimmune thyroid disease in newly diagnosed type 1 diabetic children are few and reported prevalence rate ranges between 4.5 - 29.4 percent. Considering the effect of age, ethnic origin, and disease duration on the prevalence of autoimmune thyroid disease in diabetic subjects, we decided to investigate the thyroid autoimmunity in newly diagnosed type 1 diabetic children in our area of residence (North-West Iran). **Methods:** This cross-sectional study was carried out between 2008 and 2010. All of the children with newly diagnosed type 1 diabetes mellitus (T1DM) presenting to the outpatient pediatric-endocrinology clinic of Tabriz University of Medical Sciences (the only university-affiliated clinic for pediatric-endocrinology in North-west Iran), were investigated for serum levels of anti-TPO, anti-Tg and TSH. **Results:** The study group included 99 children [mean age  $7.75 \pm 3.21$  years (range 1.2 - 14), 45 boys (45.5%) and 54 girls (54.5%)]. About 9% of patients were seropositive for anti thyroid antibodies and females were affected more than males. The mean TSH level of subjects above 12 years of age ( $3.5 \pm 2$ ) was significantly ( $p = 0.037$ ) higher than those below this age. **Conclusion:** Autoimmune thyroid disease and even hypothyroidism may accompany T1DM at its presenting time in children. This finding is more common in girls especially those above 12 years of age.

**Keywords:** Newly Diagnosed Diabetes; Autoimmune Thyroid Disease; Children