Hypothyroidism is prevalent among pediatric patients with T1DM and is associated with a more aggressive form of the disease. Patients with T1DM and hypothyroidism have higher rates of DKA, develop the disease at younger ages, and require higher insulin doses. T2DM patients are also more prone to thyroid disorders.

The prevalence of thyroid dysfunction in adults with T2DM patients was reported to be 12.3% in Greece and 16% in Saudi Arabia and has been reported to be associated with insulin resistance. The prevalence of thyroid disorders and autoimmunity has not been reported in children with T2DM.

We report the thyroid status and autoimmunity in children and adolescents with T1DM and T2DM diagnosed between 2012 and 2016 in Doha, Qatar investigated during their first presentation.

This was a cross sectional descriptive study to determine the thyroid function (Free thyroxine (FT4) and TSH) and anti-thyroid peroxidase antibody (ATPO) in a cohort of children and adolescent (aged 2-16 years) with T1DM (n=396) and compare them with those for children with non-familial T2DM (n=50) at their first presentation at Hamad General Hospital.

At first presentation, children and adolescents with T2DM had similar prevalence of hypothyroidism compared to children with T1DM. Children with T2DM had higher prevalence of subclinical hypothyroidism and ATPO positivity versus T1DM children.

Our study documents higher prevalence of autoimmune thyroid disorders in children and adolescents with T2DM.