

Background

Increased prevalence of autoimmune thyroid disease (ATD) in patients with type 1 diabetes mellitus (T1DM) has been extensively described. Since 1996, screening for thyroid disease has been implemented in children and adolescents with T1DM and is performed at least annually.

Objectives

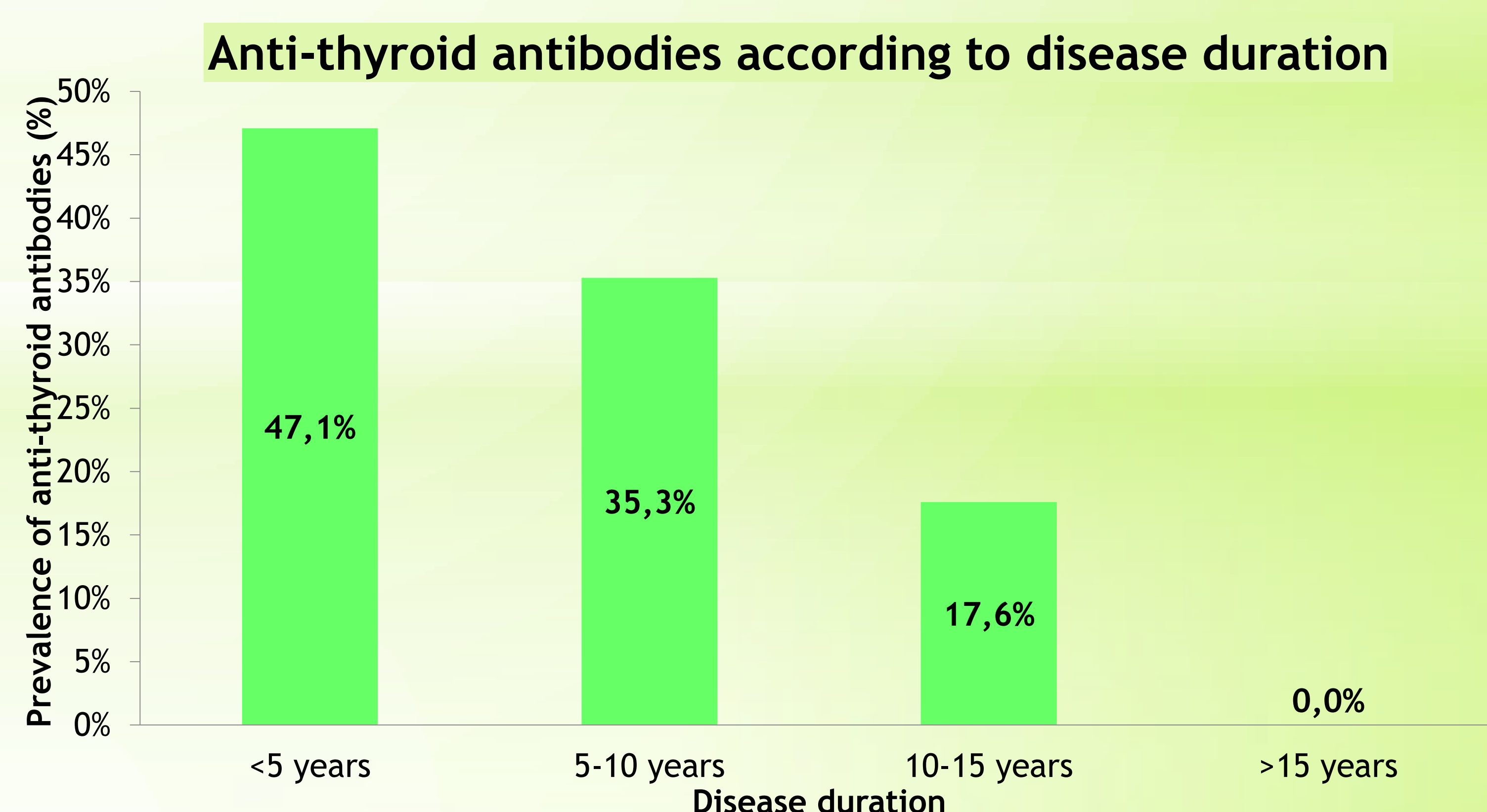
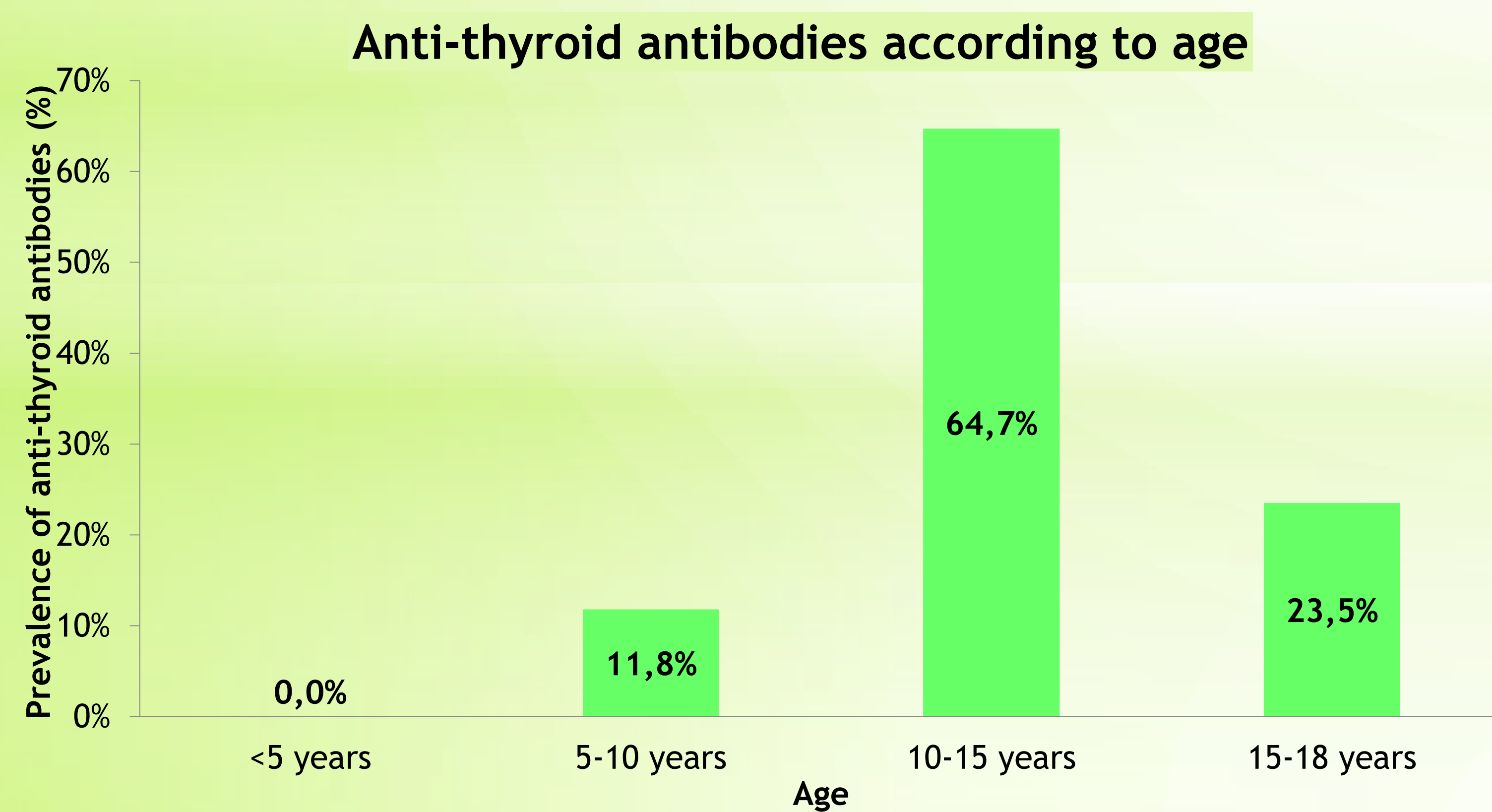
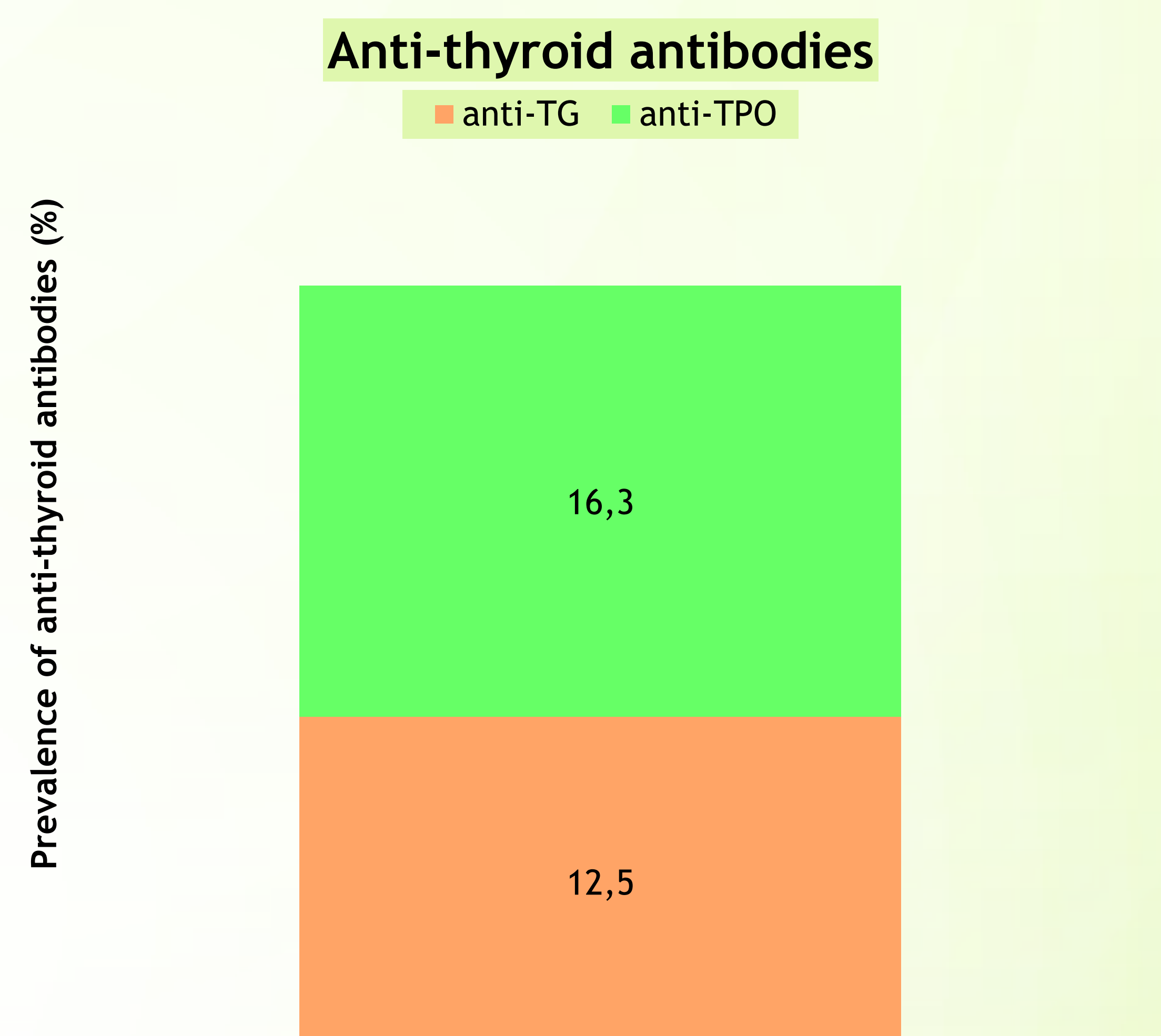
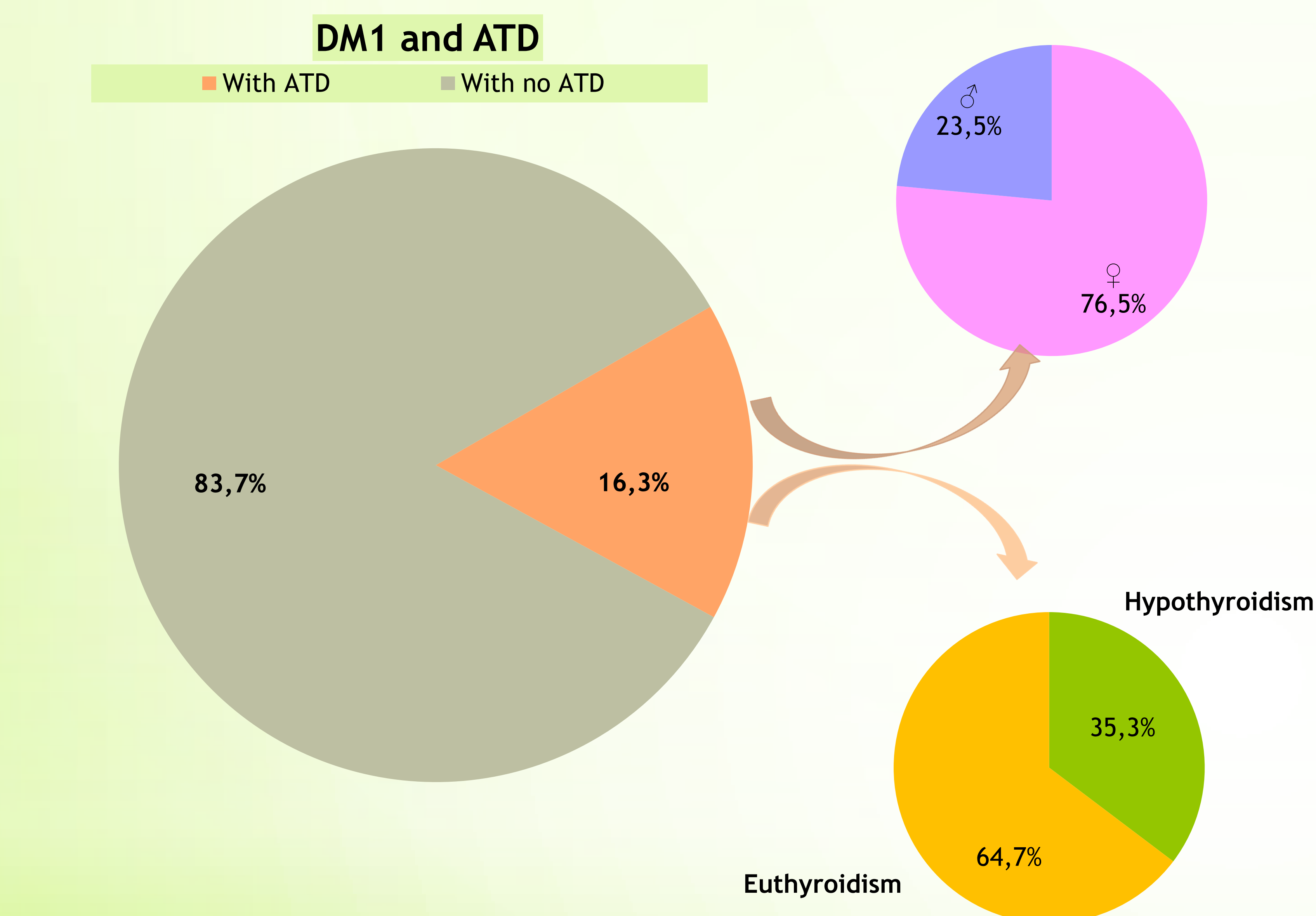
The aim of this study is to determine the natural history and incidence of ATD in T1DM pediatric patients and the relationship between positive anti-thyroid antibodies and potential risk factors, including age, gender and duration of diabetes.

Method

A group of 104 patients with T1DM and on intensive insulin therapy was studied. Thyroid-stimulating hormone (TSH), free thyroxine (FT4), anti-peroxidase (anti-TPO) and anti-thyroglobulin (anti-TG) antibodies were measured. The results were stratified by sex and age.

Results

Our population consisted of 104 T1DM patients (47.1% female, 52.9% male) with a median age of 12.5 years (3.3-17.9 years). ATD was diagnosed in 17 patients (16.3%). The presence of serum anti-thyroid antibodies was significantly higher in females (76.5%). 35.3% (n=6) of ATD patients had hypothyroidism and were medicated with levothyroxine. The prevalence rates of anti-thyroid antibodies were: anti-TPO 16.3% (n=17) and anti-TG 12.5% (n=13). In the age group below 10 years, 5.9% (n=1) had thyroid antibodies and in the age group above 10 years, 94.1% (n=16). 64.7% (n=11) of the 17 patients had T1DM for at least 5 years.



Conclusion

Thyroid autoimmunity was related with increasing age, female gender and longer diabetes duration. Our results confirmed the high prevalence of ATD in patients with T1DM. Many studies demonstrated similar prevalence of thyroid antibodies in children and adolescents with T1DM (16.2%¹⁰, 21.6%¹¹). These data support the recommendation for regular examinations of thyroid antibodies and thyroid function assessment in T1DM patient, regardless of symptoms, because it could reveal cases of ATD^{2,6-10}.

References

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