



Positive Thyroid Peroxidase (TPO) antibodies at diagnosis of Type 1 Diabetes Mellitus (T1DM) is associated with earlier onset of thyroid disorders

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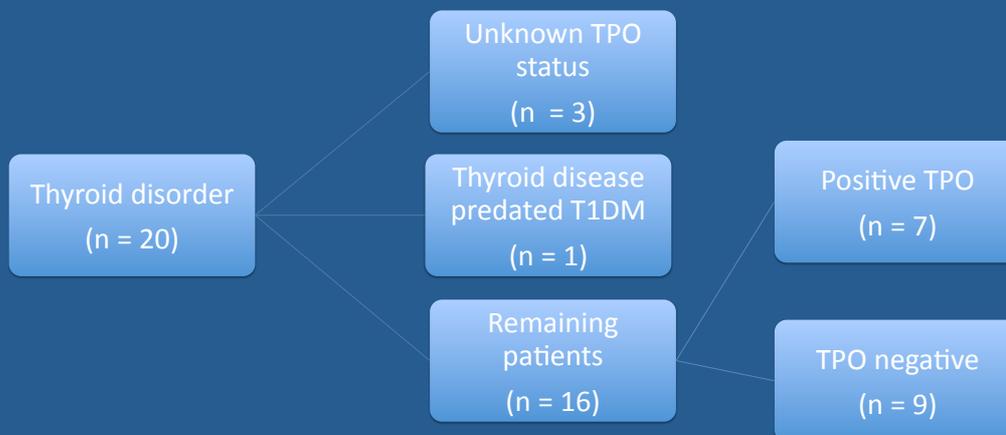
Aims and Methods

- To assess the relationship between TPO antibodies and development of thyroid disorders in children with T1DM.
- TPO antibody status and duration of diabetes at diagnosis of thyroid disorder were cross-sectionally examined in all children attending the Type 1 Diabetes clinic in Oxford.

Results

Number of children with thyroid disorder = 20. This represented 5.9% of the clinic. There was a female preponderance (M:F ratio 1:6)

The majority had hypothyroidism (90%, n=18) with 10% (n = 2) having hyperthyroidism. In one patient the thyroid diagnosis predated the T1DM diagnosis by 5.6 years. She was discounted from further analysis, as were 3 patients in whom TPO antibody status at diagnosis of T1DM was unknown. Of the remaining patients with thyroid disorder (n=16), TPO antibodies was positive in n=7.



In this group with positive TPO antibodies, the duration from diagnosis of T1DM to developing thyroid disorders was 0 - 4.7years (mean 1.4), compared to 0.04 - 11.9years (mean 8.1) in those with negative TPO antibodies at T1DM diagnosis (n=9). The p-Value was significant at 0.0005.

Most patients who developed thyroid disorders (n=16) were in the pubertal age range: 10-15years (median age 11.5 years).

Conclusion

- Positive TPO Abs at diagnosis in children with T1DM is associated with a significantly earlier onset of thyroid disease. This may warrant closer monitoring of symptoms, and increased biochemical monitoring if clinically indicated.
- Consistent with observations in non-diabetic populations, there is a higher incidence of thyroid disease in girls with T1DM, particularly around the time of puberty.