

ANALYSIS AND COMMENTARY ● ● ● ● ●

The results are remarkable, since they were obtained from a very large population base of young patients with type 1 diabetes. Compared to similar studies in normal subjects, this group of patients had a highly increased incidence of SCH and even a higher incidence of thyroid antibodies. SCH in adults is associated with an increased lipid profile, and most studies suggest an increased cardiovascular risk. Here the authors prove that in a considerable fraction of even a young population with type 1 diabetes, serum lipids are significantly increased. These novel data are therefore an important addition to our knowledge about the connection of diabetes and thyroid disease. In this respect, young patients are not different from adult patients with type 1 diabetes.

One might wonder why the effects of SCH on the lipid profile are so small. This is particularly puzzling, since the range of SCH was defined by a TSH as high as 4 to 25 mU/L. The authors give no information on how many of these patients had a serum TSH in the lower range, for instance between 4 and 10, or 11 and 15 mU/L, etc. However, one may safely guess that the whole sample of study patients contained only a few individuals with a serum TSH as high as 24 mU/L

and still normal thyroid hormone levels. At least in adults, it is unusual to find a patient with a serum TSH of 15 mU/L and still normal thyroid hormone levels, and this is even more unlikely for a TSH of 24 mU/L. I suspect that the large majority of the patients included in this study had serum TSH in the low range defined for SCH. If so, this may explain the small effect of SCH on the lipid profile; still, screening for SCH in young patients with type 1 diabetes seems to be highly advisable.

The study also revealed a high prevalence of euthyroid patients with positive thyroid antibodies. The risk of hypothyroidism cannot be neglected in such patients.

Also, the study does not provide arguments as to the question of whether rigorous treatment with thyroxine may improve the lipid profile. It is hoped that the authors will provide data on these important points in a few years. Based on the evidence from adults, it seems reasonable to treat the patients with SCH described here with T₄, particularly if the serum TSH is repeatedly above 7 to 10 mU/L. Some endocrinologists recommend starting treatment even if serum TSH is above 4 mU/L, but there are not data showing benefit from such a treatment.

References

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