Euthyroid Hashimoto thyroiditis in children: evolution over time

**INTRODUCTION**
- Subclinical hypothyroidism (SH): normal fT4, 5<TSH <10 U/L
- Causes: Hashimoto thyroiditis, Isolated hyperthyrotropinemia
- Treatment with L-Thyroxine: controversial.
- Even if most of the studies indicate a trend towards hypothyroidism with advancing age, there are retrospective studies showing spontaneous normalization of TSH.
- There are no valid factors useful for the prediction of progression of SH towards frank hypothyroidism.

**OBJECTIVES**
To evaluate the natural course of euthyroid thyroiditis in children and adolescents and assess the presence of possible modulating factors.

**METHODS**
- Retrospective study.
- 87 children (63 girls, 24 boys, mean ± sd age: 10.6 ± 3.2 yrs), with Hashimoto thyroiditis and normal fT4.
  - 64 with normal TSH <5U/L (group 1).
  - 23 with SH 5<TSH<10U/L (group 2).
- Measurements of fT4 and TSH were recorded every 6 months for at least 2 years, if they remained euthyroid with TSH<10U/L.
- Hashimoto thyroiditis diagnosis was based on:
  - positive anti-TPO and/or anti-TG Abs (increased at least double the upper normal limit) in association with
  - the classical sonographic findings (goiter, heterogeneous sonographic pattern, hypechoegonic areas, fibrous septa, multiple or solitary nodules, pseudonodules, sometimes with calcifications and cysts).
- Thyroid (both thyroglobulin and thyroid peroxidase) Abs were measured with the same commercial chemiluminescent immunometric method (Diasorin Advantage Analyzer).
- Follow-up was obtained every 6 months.
- Auxological measurements included recording of HtSDS, BMISDS.
- Thyroid ultrasound.
- TSH, fT4, anti-TPO, anti-TG abs measurements.
- During follow-up:
  - None of the patients became hypothyroid.
  - Whenever TSH>10U/L, patients were given L-thyroxine treatment.

**CONCLUSIONS**
- A significant percentage of children (63%) with Hashimoto thyroiditis remained or became euthyroid during a follow-up period of at least 2 years.
- Antithyroid Abs levels at presentation and their progressive increase may represent predictive factors of the development of hypothyroidism in children with Hashimoto thyroiditis.

**BIBLIOGRAPHY**