

# Relationships between antithyropoxydase antibody levels, thyroid function and echographic patterns in chronic thyroiditis – December 2012

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**Aim and objectives.** To investigate the rapport between the level of thyroid function, through blood level of TSH, both at onset, and in evolution and the level of antithyropoxydase antibodies (ATPO) and antithyroglobuline antibodies (ATG) in Hashimoto thyroiditis and related diseases.

**Material&Method.** **1. Diagnosis:** a. ATPO > 34 u/ml = Hashimoto thyroiditis (HT); b. ATPO=normal with high ATG = thyroiditis with only hyper-ATG (T-ATG); c. hypothyroidism without high ATPO/ATG = idiopathic mixedema (IM). **2. Thyroid function:** TSH (and FT4) **3. Echographic patterns = 10** (Peretianu, this Congress) .

**4. Statistical analysis:** linear correlation test, X<sup>2</sup> test.

## Results.

I. ATPO/ATG at onset: 1. ATPO: A. Number analysis: HT-1194, T-ATG-80 B. Average: TH-677,7; SD: 1190 (!); T-ATG-11,81; IM-10. 2. ATG in T-ATG: 483,23; SD: 852 (!).

II. Evolutional types for ATPO/ATG: 1. All ATPO in HT: no.2055, av: 740,17 ui/ml. 2. ATPO evolution in HT: undulatorious: 150 (40,31%), decreasing: 156 (40,31%), increasing: 81 (20,93%). 3. All ATG in T-ATG: no. 100, av: 415,71. 4. ATG in T-ATG: undulatorious: 4 (18,18%), decreasing: 11 (50%), increasing: 7 (31,81%)

III. TSH. 1. onset HT: av: 8,83 mu/l; 2. onset T-ATG: 3,63 mu/l, SD=4,33. 3. Hypothyroidism HT: 41,12%; Hypothyroidism T-ATG: 28,7% (X<sup>2</sup>=14,44, p = 0,044).

IV. Linear correlation ATPO-TSH: 1. in HT: a. HT at onset: r= 0,17, p < 0,001, slope: 8,31. b. all TH values: r= 0,11, p <,001; 2. in T-ATG: a. at onset: r= -0,19, p >> 0,1 (NS); b. all T-ATG values: r=-0,17, NS; c. MI at onset/and all values, r=-0,17, p> 0,1 (NS).

V. Echographic pattern 1 vs echographic pattern 8 in HT correlate with ATPO level (table): X<sup>2</sup> >> 24,9; p << 0,001.

ATPO levels	Pattern 1 marked hypoechogenous pseudonodular	Pattern 8 only slightly hypoechogenous pseudonodular	Total
0-34	21	0	21
34-100	180	12	192
100-350	324	39	363
350-999	336	25	361
1000-1999	244	10	254
2000-4999	73	1	74
> 5000	37	1	38
Total	1215	88	1897

## Conclusions

**1. A certain correlation exists between thyroid function but only for ATPO (not ATG), only in cohorts (not <400 probes), only in HT (not T-ATG): when ATPO increases, thyroid function decreases.** **2. HT vs T-ATG evolve with more hypothyroidism.**

**3. Pattern 8 is related low ATPO levels as compared with pattern 1. Therefore, pattern 1 suggest more inflammation than pattern 8.**