EEG-Alterations are common in Hashimoto´s Thyroiditis

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BACKGROUND
Steroid responsive encephalopathy with autoimmune thyroiditis (SREAT) is a rare clinically and electrographically heterogeneous encephalopathy associated with thyroid autoantibodies. Thyroid antibodies are the most frequent to be found in Hashimoto´s Thyroiditis (HT).

OBJECTIVE & HYPOTHESES
We aimed to investigate, whether
✓ children and adolescents with HT without acute clinical manifestation of SREAT show electroencephalogram (EEG) alterations,
✓ and to compare EEGs of HT patients with those of healthy subjects.

METHODS
EEGs were performed in 31 patients with HT recruited via our paediatric-endocrine clinics and in 28 healthy controls matched for age and gender. Antibodies against thyroid peroxidase and thyroglobulin were determined in all subjects, TSH and fT4 in HT patients solely.

RESULTS (I)
Table 1 gives an overview of the study population. The patients’ fT4 values were all within the age-appropriate normal range. 19 patients had normal TSH values, while 7 had values marginally above and 5 slightly below the normal range.

RESULTS (II)
HT-patients showed significantly more often EEGs that were found to be abnormal compared to the control group (Figure 1). Two EEGs with mild/questionable alterations in the patient group and three in the control group were classed as normal for statistical analysis.

SUMMARY
Children/adolescents with HT without clinical signs of SREAT present more often with EEG abnormalities.
This could indicate a cerebral concurring in HT
We speculate that those alterations might lead to SREAT as the maximal manifestation
Consequently, we suggest regular EEG checks in patients with HT.