Graves’ Disease in Childhood and Adolescence: Clinical Manifestations, Adverse Effects, and Predictive Response Factors to Antithyroid Drugs

Introduction

Antithyroid drugs (ATD) are recommended as the initial treatment in Graves’ disease in childhood and adolescence. Identification of predictive response factors to ATD might lead to improve patient’s management by facilitating the identification of patients requiring long-term ATD or early alternative therapy.

Materials and Methods

We performed a retrospective and descriptive study. We evaluated 157 patients with an average age of 10.78 ± 3.17 years and that were seen between September 2005 and May 2012 at J.P. Garrahan Hospital. All patients were initially treated with methimazole 0.25 to 1.0 mg/kg/day.

We evaluated clinical presentation, chronological age and serum level of TSH, T3, T4, fT4 and TBII (TSH, T3, fT4: CMIA - Architect, Abbott, T4: IMMULITE 2000 Immunoassay System, Siemens, TBII: radioreceptor assay, SRS) at diagnosis and adverse effects of ATD, percentage of remission (defined as being euthyroid for at least 1 year after cessation of ATD).

Results

Clinical Presentation

ATD: Adverse effects

Response to ATD

Factors for poor response to ATD

Conclusion

The most common symptoms in our population were tremor, weight loss and tachycardia.

Adverse effects generated by ATD were observed in 29 patient (21%): hepatitis, hematological disorders and arthritis, reported in 8%, 7% and 6% respectively.

We observed a poor response to ATD in young patients, large goiter, high serum T3 and TBII levels.

Early alternative therapy (Surgery or Radioiodine) should be considered in these patients.

References