Abstract:

To determine a levothyroxine (T4) dose recommendation for the treatment of autoimmune thyroiditis (AIT)-induced hypothyroidism. T4 doses in 75 children and adolescents with newly diagnosed AIT were prospectively collected and compared to T4 doses of patients with congenital hypothyroidism (CH, n=22). Results: Sixty-four patients with AIT and 22 patients with CH were included in the analysis. The thyroid-stimulating hormone declined significantly from 25.8 ± 50.1 to 2.1 ± 1.5 ?IU/mL (AIT group; p= 6 to= 10 to= 12 to= 14 years: 1.4 ± 0.6 ?g T4/kg per day). It deviated significantly from the CH patients’ mean T4 dose of 2.8 ± 0.7 ?g T4/kg per day, p<0.01. CH patients with athyreosis required an average dose of 3.1 ± 0.5 ?g T4/kg per day; patients with ectopia, 2.6 ± 0.7 ?g T4/kg per day; and patients with dyshormonogenesis, 2.5 ± 0.6 ?g T4/kg per day. Conclusion: Juvenile patients with AIT require significantly lower T4 doses than patients with CH.