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Iodine deficiency among hypothyroid patients living in Jeddah.

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Abstract

The objective was to determine the prevalence of iodine deficiency among hypothyroid patients and the effect of dietary goitrogens on indices of iodine and thyroid status. This is a case-control study of 106 subjects who were recruited from King Abdulaziz University Hospital, Jeddah. Blood and urine were collected for serum thyroid hormones, thyroid autoantibodies, thyroglobulin (Tg) and urinary iodine concentration (UIC). Dietary iodine and goitrogenic food intake were assessed by questionnaire. Using World Health Organization (WHO) cutoff values for UIC, both controls and cases were iodine deficient (85% and 83%, respectively). Furthermore, dietary iodine was deficient in 23% of controls and 36% of cases. In cases, there was a positive association between UIC levels and serum thyroid stimulating hormone ($r = 0.405$, $p < 0.01$) and a negative association with serum fT(4) ($r = -0.358$, $p < 0.01$). Serum Tg antibody titers were also positively associated with dietary iodine ($r = 0.328$, $p < 0.05$). Patients with elevated serum autoantibodies had lower UIC and dietary iodine than those with normal serum autoantibodies. UIC was associated with dietary goitrogens including turnip ($r = 0.280$, $p < 0.05$) and pine ($r = 0.289$, $p < 0.05$) among cases. Iodine deficiency is common and the consumption of dietary goitrogens is high among euthyroid and hypothyroid subjects living in Jeddah