



6th European Congress of Endocrinology, Lyon, France, 26-30
April 2003: Abstract book. Lyon, 2003. P0908

USE OF NEW IODINE-CONTAINING ORGANIC COMPOUND

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Abstract: According to ICCIDD, the incidence of goiter is directly proportional to the severity of iodine deficiency. Therefore, stable normalization of iodine provision in patients with euthyroid iodine-deficient goiter must be accompanied by resorption of the hyperplastic thyroid gland and improvement of the functional state of the hypophysial-thyroid system.

In this report, the evaluation results of a new organic iodine compound for individual prophylaxis of iodine deficiency and iodine-deficient states are presented.

Studies were conducted by three independent research groups in Tver, Bryansk and Oryol Regions of the Russian Federation. First of all groups of patients with euthyroid goiter were separated basing on ultrasound and laboratory findings and invited to take part in the investigation. Three groups were formed: In Oryol Region 42 children and teen-agers (Group 1), in Bryansk Region 80 adults and 40 children (Group 2), in Tver Region 32 children (Group 3). Two tablets of Iod-activ per day (equivalent to 100 mcg iodine) were given to each participant. The patients were examined initially, 3, 6 and 9 months after the start of iodine deficiency prophylaxis.

The study included iodine provision evaluation, ultrasound examination of the thyroid gland including biometry, evaluation of the functional state of the hypophysial-thyroid system. To evaluate the functional state of the hypophysial-thyroid system, thyrotropin (TSH) and free thyroxine (FT4) content in blood was determined. To evaluate autoimmune lesion of thyroid tissue, antibodies to thyroglobulin (ABTG) and antibodies to thyroperoxidase (ABTPO) were analyzed.

The following results were obtained: In all the groups, initial medians of urinary iodine concentration were under the lower limit of norm. During the research period they became into the norm limits. In children of Group 1 initial mean thyroid volume was 23.6 ± 3.1 ml; 9 months after the start of using the preparation it was 14.4 ± 2.1 ml. At the moment of the completion of investigation, only in 11 of 42 children thyroid goiter was diagnosed. In the Group 2, initial thyroid volume was 23.3 ± 1.4 ml in boys-adolescents and 21.4 ± 1.0 in girls-adolescents, respectively; in 6 months of the study the thyroid volume was 19.1 ± 0.7 ml in boys and 17.5 ± 0.9 ml in girls. In male adults thyroid volume was 29.6 ± 1.4 ml initially and 24.8 ± 1.2 ml at 9 months, in female adults initial thyroid volume was 22.6 ± 1.5 , at 9 months it was 18.5 ± 0.7 ml. In the Group 3, initial thyroid volume was 13.25 ± 1.8 ml, at 9 months it was 8.25 ± 0.8 ml. In all the groups, the TTH and FT4 levels did not change considerably during the investigation. Positive ABTG and ABTPO reduction in blood was noted.

Thus, three independent studies have revealed positive morphofunctional dynamics of the development of euthyroid goiter against the background of using Iod-activ.