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Treatment of the Sodium Drug Levothyroxine in the Treatment of Hypotheriosis Efficiency

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ABSTRACT

A sharp decrease in the functioning of the thyroid gland, insufficient functioning of which causes hypotheriosis. The disease often occurs in older people, mainly women. Primary hypotheriosis is associated with the pathology of the thyroid gland, which leads to a decrease in the mass of the glandular tissues of the thyroid gland and a decrease in the synthesis of the hormones Thyroxine and triiodothyronine .This may be due to aplasia or agenesis of the thyroid gland, autoimmune processes, iodine deficiency, secondary hypotheriosis("Central") is associated with loss of tropical function of the pituitary gland (decreased production of thyrotropin).

The purpose of the study: Levothyroxine sodium is a synthetic form of the thyroid-produced hormone thyroxine (T4). Levothyroxine sodium is odorless, almost white or light brown-yellow, crystalline powder. It is very slightly soluble in water, 250 hours soluble in ethanol (96%), practically insoluble in chloroform and ether, soluble in alkaline solutions. The molecular weight is 798.86.L-thyroxine is a drug whose acting substance is the thyroid hormone levothyroxine. It has the same effect as a natural hormone. The drug L-thyroxine is taken to replace the non-existent thyroid hormone or to reduce the load on the thyroid gland. After partial transfer to triiodothyronine (in the liver and kidneys) and body cells, it affects the development and growth of tissues, metabolism. In small doses, it has an anabolic effect on protein and fat metabolism. In moderate doses, it promotes growth and development, increases the need for oxygen in tissues, proteins, fats and ugle

Methods of examination: the diagnosis is based on the clinical manifestations of the patient, in particular, the level of thyroid hormone over time. Thyroxine (T4 - norm-50-140 nmol / L for children older than 2 months) and triiodothyronine (T3 - norm-1.50 -2.5 mmol / l) are detected. with hypotheriosis, their level decreases in proportion to the severity of the disease, the level of TTG increases sharply. Certain changes in the level of thyroid hormones are possible under the influence of unfavorable environmental conditions, factors of professional activity (chemicals, radiation). When administered orally, levothyroxine sodium is almost exclusively absorbed in

the upper small intestine. Up to 80% of the dose of the drug is absorbed. Nutrition reduces the absorption of sodium levothyroxine. Cmax is achieved about 5-6 hours after ingestion. Upon absorption, more than 99% of the drug binds to serum proteins (thyroxine-binding globulin, thyroxine-binding prealbumin, and albumin). Miscellaneous nodule in various tissues, about 80% of Levothyroxine Sodium is mono-deodized to form triiodothyronine (T3) and inactive products. Thyroid hormones are mainly metabolized in the liver, kidneys, brain and muscles. A small amount of the drug is subject to deaminization and decarboxylation, as well as conjugation with sulfuric and glucuronic acids (in the liver). Metabolites are excreted through the kidneys and intestines. The Half-Life of the drug is 6-7 days. With thyrotoxicosis, the Half-Life is reduced to 3-4 days, and in hypotheriosis-up to 9-10 days. The Daily Dose is determined individually, depending on the indications. In the daily dose, L-thyroxine is taken in the morning on an empty stomach, at least 30 minutes before meals, taking a tablet with a small amount of liquid (half a glass of water) and not chewing, but by mouth. When conducting hypotheriosis replacement therapy in patients under 55 years of age with non-cardiovascular diseases, L-thyroxine is prescribed at a daily dose of 1.6-1.8 mcg / kg of body weight; in patients over 55 years of age or with cardiovascular diseases-0.9 mcg / kg of body weight. With severe obesity (BMI ≥ 30 kg / m2), the calculation should be done in terms of "ideal weight". Infants and children under 3 years of age are given a daily dose of L-thyroxine in one dose 30 minutes before the first feeding. The tablet is dissolved in water until a fine suspension, which is prepared immediately before taking the drug. In hypotheriosis, L-thyroxine is usually taken throughout life. Euthyroid state of L-thyroxine in thyrotoxicosis L-thyroxine is used in complex treatment with antithyroid drugs after reaching euthyroid state. In all cases, the duration of treatment with the drug is determined by the doctor.The initial stage of replacement therapy for hypotheriosis is the initial dose for non-cardiovascular patients under 55 years of age: women - 75-100 mcg per day, men - 100-150 mcg / day. The initial dose for patients with cardiovascular diseases or over 55 years of age-rises to 25 mcg with an interval of 2 months until the normalization of TTG in 25 mcg per day recommended doses of levothyroxine for the treatment of hypotheriosis

Daily dose of age Levothyroxine (mcg) dose Levothyroxine per body weight (mcg/kg) 0-6 months 25-50 10-15

6-12 months 50-75 6-8

1-5 years 75-100 5-6

6-12 years 100-150 4-5

≥12 years 100-200 2-3

Summary. Therapy with levothyroxine sodium, prescribed for hypotheriosis during pregnancy and breastfeeding, should be continued. During pregnancy, an increase in the dose of the drug is required due to an increase in the level of globulin, which binds thyroxine. The amount of thyroid hormone released in breast milk during lactation (even when treated with high doses of the drug) is insufficient to cause any discomfort in the child. During pregnancy, the drug should not be used in combination with antithyroid drugs, since taking sodium levothyroxine may require an increase in the dose of antithyroid drugs. As antithyroid drugs, unlike levothyroxine sodium, can pass through the placenta, the fetus may develop hypotheriosis. In congenital hypotheriosis, substitute therapy is treated with the synthetic thyroid hormone levothyroxine sodium. Its initial dose is 10-15 mcg/kg/day. The dose is then selected based on changes in constant observation.In the 1st week of treatment, a regression of hypotheriosis is observed. Symptoms disappear completely in a few months. Levothyroxine sodium is heavily used in practice.It is advisable to start substitute therapy in time after the diagnosis of hypotheriosis. The aim of the treatment is to normalize the thyroid hormones in the blood and then maintain a stable concentration of TTG and thyroid hormones.

Books

1. И.И.Дедов. Эндокринология 2010г
2. Гипотиреоз: искажение сущности А.В. Ушакова, 2020. – 96 с. Москва
3. Narmetova, S. Y. (2023). Advantages of Insupride in the Treatment of Type 2 Diabetes. *Web of Synergy: International Interdisciplinary Research Journal*, *2*(2), 351-353.
4. Страсти по щитовидке. Аутоиммунный тиреоидит, гипотиреоз. С.Х.Аскольдович
5. Тошматова, Г. (2022). *Yosh sportchilarning ovqatlanish holatini gigiyenik baholash* (Doctoral dissertation, "Yosh olimlar kunlari" Respublika ilmiy-amaliy anjumani xalqaro ishtirok bilan tezislar to'plami 416-418 bet).
6. Рудницкий Л.В. Заболевания щитовидной железы: лечение и профилактика
7. Rajabboevna, A. R., Yangiboyevna, N. S., Farmanovna, I. E., & Baxodirovna, S. D. (2022). THE IMPORTANCE OF COMPLEX TREATMENT IN HAIR LOSS. *Web of Scientist: International Scientific Research Journal*, *3*(5), 1814-1818.
8. Murodovna, J. D., Bakhodirovna, S. D., & Yangiboyevna, N. S. (2022). Learning Liquid Medicine Forms and Writing Prescriptions for Medical School Students. *Central Asian Journal of Medical and Natural Science*, *3*(5), 72-76.