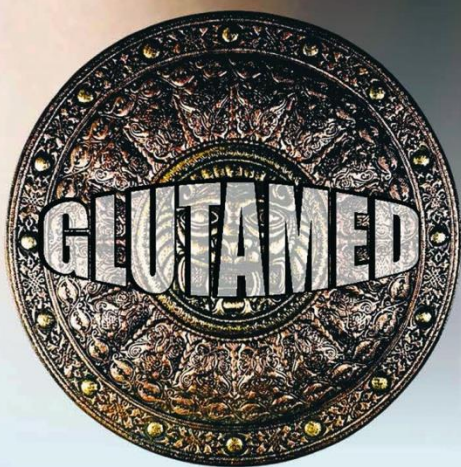


GLUTAMED



SHIELD OF THYROID GLAND

A.B.-BIOKOM

GLUTAMED DRUG IN A NEW TREND IN THE TREATMENT OF THYROID DISEASE

- **GLUTAMED IN THE TREATMENT OF THYROID DISEASES SHOWED AN EARLY AND HIGH THERAPEUTIC EFFECT.**
- **MEDICINE HAS A NORMALIZING EFFECT ON INCREASING THYROID SIZE AND STRUCTURAL INTEGRITY OF THYROCYTES.**
- **GLUTAMED, WITH NODULAR AND MIXED GOITER, PROMOTES A SPEEDY AND EFFECTIVE REDUCTION IN THE SIZE KNOTS, UNTIL THEY DISAPPEAR ALTOGETHER.**
- **UNDER THE EFFECT OF THE DRUG, IN A SHORT TIME PERIOD, THE DISAPPEARANCE OF THE MAIN CLINICAL SYMPTOMS OF HYPOTHYROIDISM CAN BE OBSERVED.**
- **GLUTAMED STRENGTHENS THE PROCESSES OF THYROID HORMONE SYNTHESIS BY STIMULATING THE ACTIVITY OF ENZYMES INVOLVED IN HORMONOGENESIS, AND THUS HELPS TO RESTORE HORMONOPOIETIC FUNCTION OF THYROID.**
- **GLUTAMED PROMOTES MORE INTENSIVE INCLUSION OF IODINE IN THE COMPOSITION OF THYROID HORMONES.**
- **UNDER THE INFLUENCE OF GLUTAMED, IN A SHORT PERIOD OF TIME, THE PROCESS OF PERIPHERAL CONVERSION OF THYROXIN INTO FREE TRIODYODTHYRONINE, WHICH IS THE MOST ACTIVE THYROID HORMONE, IS RESTORED. IT HAS A POSITIVE INFLUENCE ON HOMEOSTATIC REGULATION OF THYROID FUNCTION OF THE ORGANISM.**
- **GLUTAMED HAS AN IMMUNOMODULATORY, ANTIOXIDANT AND HEMATOPOIETIC ACTIVITY.**

COMPOSITION

The drug consists of two active substances that complement each other in terms of clinical effect:

First active substance: **Glutamed** (complex of copper with glutamic acid) - 2 mg (light blue tablets)

Second active substance: **Potassium iodide** - 131 mkg, dose equivalent to 100 mkg elemental iodine (white tablets)

INDICATIONS FOR USE

It is used to treat iodine deficiency diseases, including those occurring with hypothyroidism:

- in the treatment of diffuse goiter
- in the treatment of diffuse goiter with an autoimmune component
- in the treatment of nodular / multinodular colloid proliferating goiter
- in the treatment of mixed goiter
- in the treatment of hypofunction of the thyroid gland
- in the treatment of subclinical and manifest stages of hypothyroidism
- in the treatment of autoimmune trioditis with hypothyroidism

METHODS OF USE AND DOSAGE

The drug as a therapeutic agent for patients is prescribed for taking orally 1.5-2 hours before a meal, 1 light - blue (Glutamed) and 1 white tablet (potassium iodide) together, 2 times a day or 2 light blue and 2 white tablets once a day. The course of therapy is 15-30 days. If necessary, the course of treatment can be extended or repeated or additional courses can be prescribed.

SIDE EFFECTS

The drug is well assimilated; no side effects have been identified.

CONTRAINDICATIONS

Thyroid hyperfunction of any etiology, hypersensitivity to the drug.

- The pronounced clinical effect of Glutamed is due to the both properties of its constituent components, and the fact that they are connected into a single composition - biocomplex, which significantly increases their endogenous activity.

Glutamed and its constituent components play an important role in metabolic processes in the human body, including the thyroid gland:

1. Copper, which is part of Glutamed, is necessary in the construction and activation of a number of hormones and enzymes, including transaminases, and plays an important role in the synthesis of thyroid hormones. Due to these properties, it enhances the assimilation of iodine and its involvement in the process of hormonal genesis. Copper is also essential for the processes of hematopoiesis, osteogenesis, pigmentation and keratisation. Under the influence of copper, various groups of vitamins are accumulated, fat and carbohydrate metabolism are normalized, and the immunobiological resistance of the body is increased.

2. Glutamic acid in the body, which is an integral part of the drug, which is the part of iodine peptides of thyroglobulin. It is also an active component of transamination processes, which is one of the key reactions in the synthesis of thyroid hormones. Glutamic acid contributes to the synthesis of acetylcholine, participates in protein and hydrate metabolism of the brain, plays an important role in the energy supply of the functions of the brain

3. Iodine in the human body is involved in the process of hormone genesis in the thyroid gland. Iodine, which enters the body from the composition of the drug in physiologic amounts, prevents the development of endemic goiter.

- Glutamed, due to a specially selected composition, it contributes to the simultaneous satisfaction of the daily requirement of human organism in such vital microelements as copper and iodine.

- High clinical efficiency of Glutamed is due to its positive influence on the most important processes of hormone genesis in the thyroid gland, as well as directly on the morphogenesis of the gland. At the same time, the main mechanisms of action of Glutamed are:

1. Stimulation of the activity of enzymes involved in the process of hormone formation

2. Promotion of intense attachment of iodine to the tyrosyl ring, which is one of the initial stages of thyroid hormone synthesis, activation of the transamination process, which is one of the most important stages of well-known hormone formation

3. Normalizing effect on the structural integrity of the thyroid gland, the form of the formation of new small follicles and an increase in the secretory activity of thyrocytes.

Due to these properties, Glutamed contributes to the effective solution of a number of issues of great clinical importance, including the problem of restoring the process of endogenous synthesis of thyroid hormones (Fig. 1).

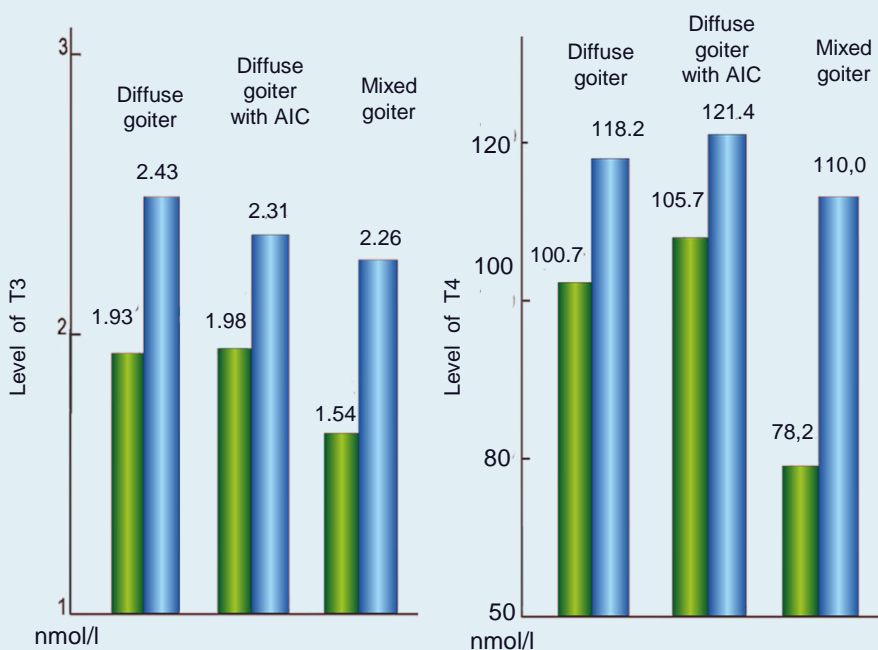


Fig. 1. Influence of Glutamed on general level of thyroidal hormones during the first 15 days of use (green columns – before the treatment; blue columns – after the treatment)

- Glutamed stimulates biochemical processes, including those in the liver. Due to this, the peripheral conversion of thyroxine (T4) to triiodothyronine (T3) is restored in a short time, which is the most active thyroid hormone.

In addition, under the influence of Glutamed, the level of free (unbound) T3, possessing the greatest and true hormonal activity (Fig. 2).

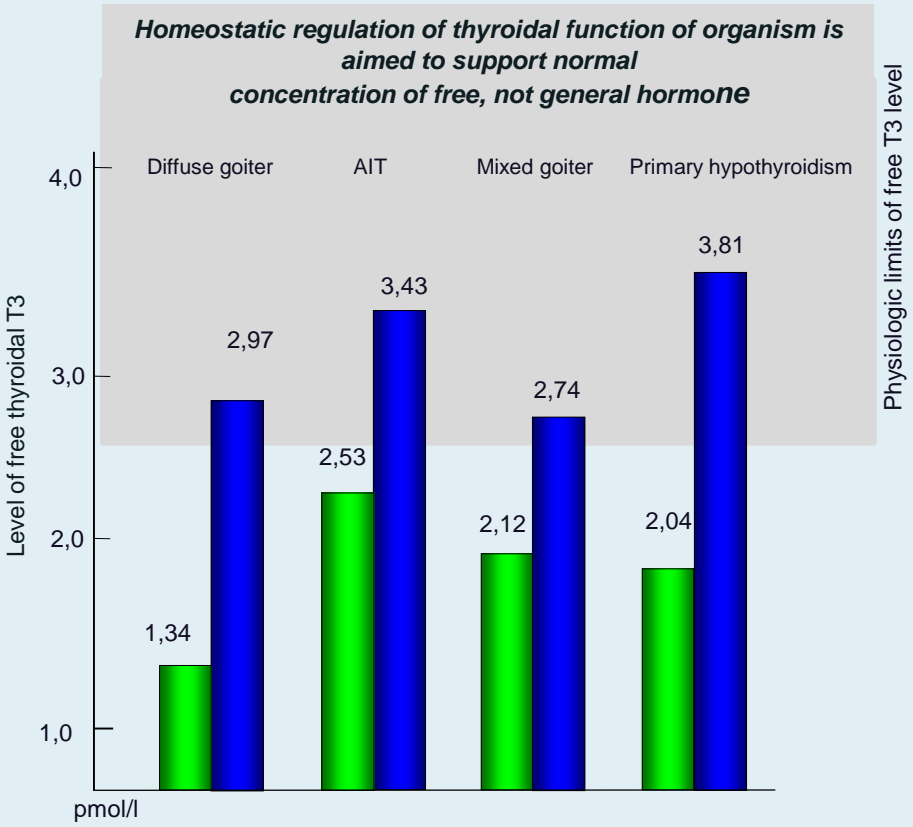


Fig 2. Influence of Glutamed on level of free thyroidal T3 hormone during the first 15 days of use (green columns – before the treatment; blue columns – after the treatment). Normally, the level of the free thyroidal T3 hormone is 2.6-5.7 pmol/l

- Glutamed promotes a rapid and effective reduction in the size of the hypertrophied gland, up to their normalization (Fig. 3).

The drug in AIT promotes intensive extinction of autoimmune processes (Fig. 4).

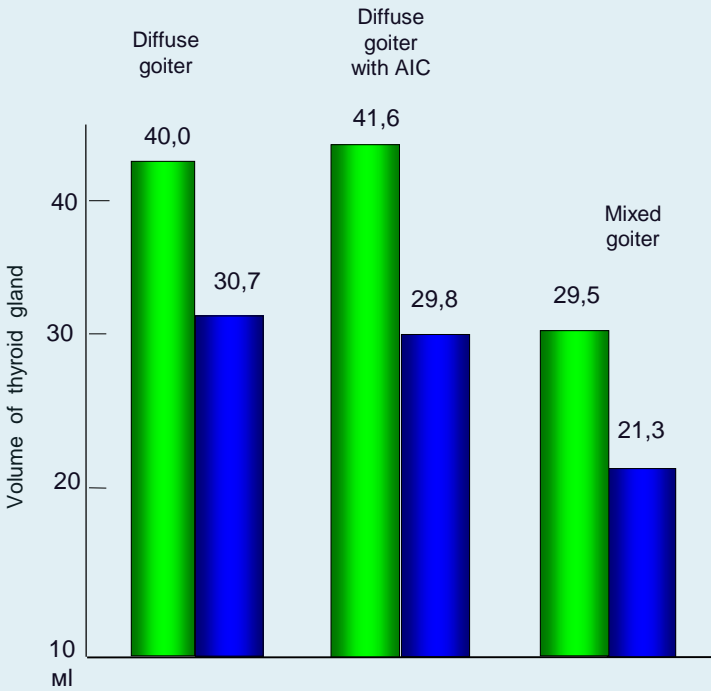


Fig 3. Influence of Glutamed on volume of thyroid gland during the first 15 days of use (green columns – before the treatment; blue columns – after the treatment)

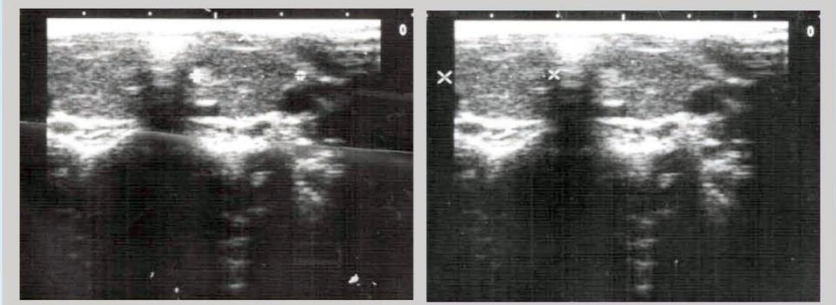


Fig 4a. The US of thyroid gland of Zilola X., 18 years old (before treatment)
 Size of left lobe – 14 x 15 x 31 mm.
 Size of right lobe – 14 x 16 x 35 mm.
 Parenchyma with areas of increased and decreased echogenicity.
 Diffuse augmentation of TG I-II degree with AIT.

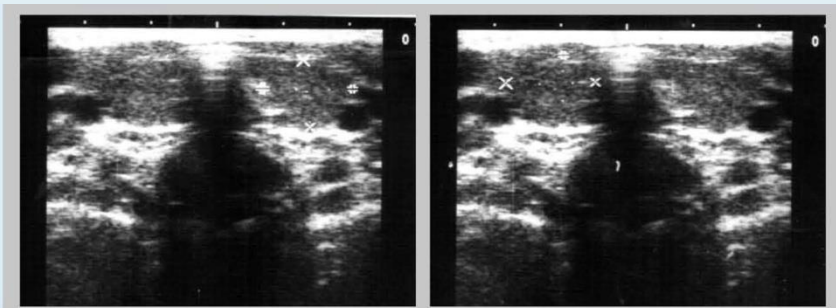


Fig 4b. The US of thyroid gland of Zilola X., 18 years old (after the 15 day therapy)
 Size of left lobe – 11 x 13 x 33 mm.
 Size of right lobe – 12 x 13 x 33 mm.
 Parenchyma is echo-homogeneous.
 Diffuse augmentation of TG I degree.
 AIT (areas of inflammation) are not detected.

- Glutamed in the treatment of the mixed goiter contributes to the rapid and effective reduction of the size of the nodes, up to their disappearance, as well as the reduction of the enlarged volume of the thyroid gland.
 (Fig 3 and 5, table)

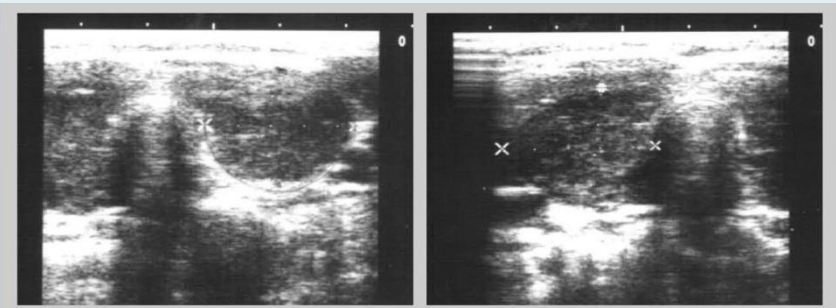


Fig 5a. The US of thyroid gland of Elena Sh., 25 years old (before treatment)
 Size of left lobe – 23 x 22 x 55 mm.
 Size of right lobe – 25 x 22 x 55 mm.
 Knot with the size of 25 x 20 mm is detected.
 Diffuse augmentation of TG III degree. Mixed goiter.

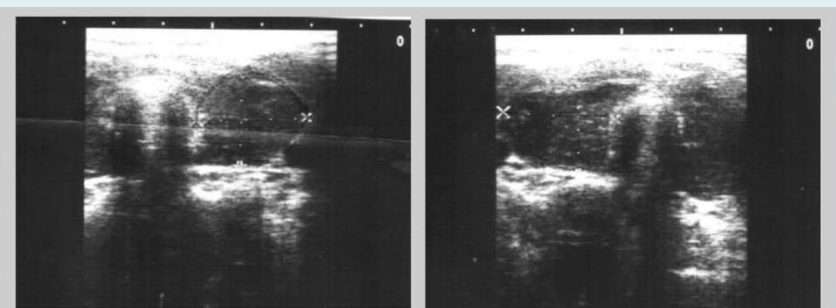


Fig 5b. The US of thyroid gland of Elena Sh., 25 years old (after the 15 day therapy)
 Size of left lobe – 20 x 22 x 55 mm.
 Size of right lobe – 21 x 23 x 56 mm.
 Knot with the size of 16 x 13 mm is detected (knot shrunk by 2.4 times).
 Diffuse augmentation of TG I-II degree. Mixed goiter.

Influence of Glutamed on the size of nodes in mixed goiter during the first 15 days of its use

Patients	Dimensions of nodes (in mm)	
	before treatment	after treatment
Rano U., 21 years old	30 x 17	25 x 14
Muattar K., 55 years old	27 x 26	25 x 22
Nargiza Y., 40 years old	18 x 9	2 x 1
Elena Z., 54 years old	34 x 27	24 x 17
Vasilya M., 67 years old	in the right lobe: 11 x 4, in the left lobe 6x4	nodes in both lobes were not found

• By the simultaneous use of Glutamed tablets and potassium iodide in diseases of thyroid etiology, an early and high therapeutic effect is achieved, proceeding with restoration of the hormone forming function of the thyroid gland, as a result, there is a pronounced decrease in the severity of the disease (Fig. 6)

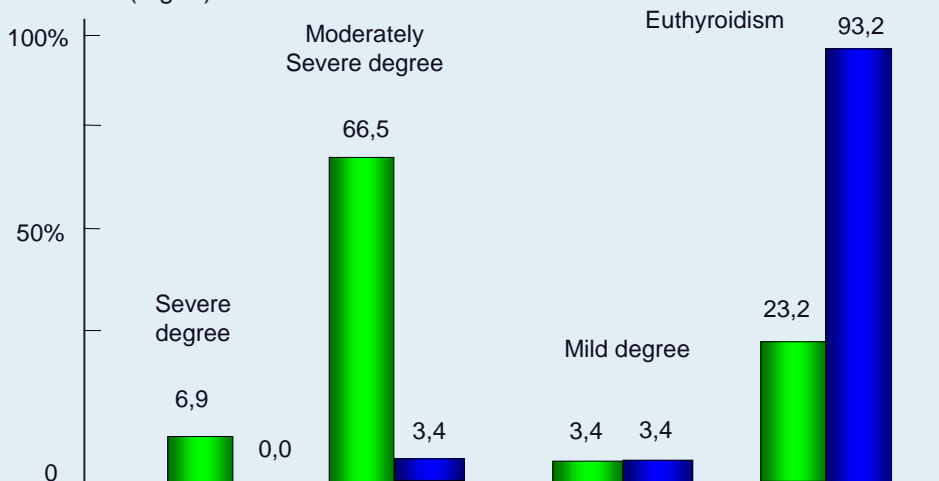


Fig 6. Influence of Glutamed on degree of hypothyroidism during the first 15 days of use (green columns – before the treatment; blue columns – after the treatment).

• Intensive restoration of hormone-forming properties, a decrease in the hypertrophied size of the thyroid gland, observed under the influence of Glutamed, contributes to the disappearance of the main clinical symptoms of hypothyroidism in a short time (table).

Terms of regression of clinical manifestations of thyroid diseases under the influence of Glutamed

Clinical manifestations	Terms of regression of clinical manifestations
Dizziness	7-8 days
Feeling of suffocation and a lump in the throat	no more than 9 days
Irritability	no more than 11 days
Reducing or stopping hair loss	no more than 11 days
Weakness (decreased performance)	no more than 10 days
Skin dryness	no more than 12 days

• Glutamed has immunomodulatory, antioxidant and hematopoietic activity. These properties of the drug are very important due to the fact that with hypothyroidism, immunodeficiency states, anemia of varying severity and a decrease in the activity of the antioxidant system are often observed.

