Tiolepta®

INTERNATIONAL NON-PROPRIETARY NAME (INN): Thioctic acid

DOSAGE FORM AND STRUCTURE:
1 coated tablet contains:
Active substance: thioctic acid (alfalipoic acid) 300.0 mg;
Excipients: potato starch 13.7 mg, colloidal silicon dioxide 13.8 mg, croscarmellose sodium 24.8 mg, lactose monohydrate 116.0 mg, calcium stearate 15.5 mg, povidone K-30 32.6 mg, microcrystalline cellulose 83.6 mg;
Film coating composition: Opadry 20A220053 yellow 20 mg, including: [hyprolose (hydroxypropyl cellulose) 6 mg, hypromellose (hydroxypropyl methylcellulose) 5.8 mg, iron dye yellow oxide 0.826 mg, yellow sunset dye yellow 0.004 mg, talc 2 mg, titanium dioxide 5.370 mg].

DESCRIPTION:
Round biconvex tablets, with a brownish yellow film coat. Light yellow on a cross section.

PHARMACOLOGICAL CLASSIFICATION:
Nosological classification (ICD-10):
G62.1 Alcoholic polyneuropathy
G63.2 Diabetic polyneuropathy

ATC CODE: A16AX01 Thioctic acid

PHARMACOLOGICAL ACTION: Metabolic agent

PHARMACODYNAMICS:
Thioctic (alpha-lipoic) acid is an endogenous antioxidant of direct (binds free radicals) and indirect action. It is a coenzyme of decarboxylation of alpha-keto acids. It helps to reduce the concentration of glucose in blood plasma and to increase the concentration of glycogen in the liver. It also reduces insulin resistance, participates in the regulation of carbohydrate and lipid metabolism and stimulates the exchange of cholesterol. Due to its antioxidant properties, thioctic acid protects cells from damage by their decay products. It reduces the formation of end products of progressive glycosylation of proteins in nerve cells in diabetes mellitus; it improves microcirculation and endoneurial blood flow, and increases the physiological content of glutathione antioxidant. Helping to reduce the concentration of glucose in the blood plasma, it has an influence on the alternative glucose metabolism in diabetes mellitus, reduces the accumulation of pathological metabolites in the form of polyols, and thereby reduces the edema of the nervous tissue. Due to its participation in the metabolism of fats, thioctic acid increases the biosynthesis of phospholipids, in particular phosphoinositides, thus improving the damaged structure of cell membranes; it normalizes the energy metabolism and conduction of nerve impulses. Thioctic acid eliminates toxic effects of alcohol metabolites (acetaldehyde, pyruvic acid), reduces the excessive formation of molecules of free oxygen radicals, reduces endoneurial hypoxia and ischemia, weakening manifestations of polyneuropathy in the form of paresthesia, burning sensations, pain and numbness of the extremities. Thus, thioctic acid has an antioxidant, neurotrophic, hypoglycemic effect, and improves lipid metabolism.

PHARMACOKINETICS
When taken orally, the drug is rapidly and completely absorbed in the gastrointestinal tract; ingestion with food reduces absorption. The time to reach the maximum concentration is 40-60 minutes. It has the first-

pass effect through the liver. Bioavailability is 30%. The volume of distribution is about 450 ml / kg. The total plasma clearance is 10-15 ml / min. The drug is metabolized in the liver by side chain oxidation and conjugation. Thioctic acid and its metabolites are excreted by the kidneys (80-90%). The elimination half-life is 25 minutes.

INTENDED USES:

- Diabetic polyneuropathy;
- Alcoholic polyneuropathy.

CONTRAINDICATIONS:

- Increased sensitivity to thioctic acid and any of the drug excipients;
- Pregnancy, the period of breastfeeding (there is no sufficient data on the use of the drug);
- Child age under 18 y.o. (efficiency and safety of the drug have not been appropriately studied).

DOSAGE AND ADMINISTRATION:

Per os, fasted, approximately 30 minutes before the first meal, without chewing and with drinking sufficient amount of water, 600 mg (2 tablets) 1 time a day. The maximum daily dose is 600 mg. The maximum course of treatment is 3 months. In some cases, the duration of the treatment can be prolonged if prescribed by the doctor.

PRECAUTION:

Alcohol intake reduces the effectiveness of the treatment, so patients should refrain from drinking alcohol during the entire course of the treatment, and, if possible, in between the courses. Alcohol consumption during the treatment is also a risk factor for the development and progression of neuropathy.

Patients with diabetes need constant monitoring of blood glucose concentration, especially at the initial stage of the therapy. In some cases, it is necessary to reduce the dose of insulin or an oral hypoglycemic drug in order to avoid the development of hypoglycemia.

Simultaneous food intake may interfere with the absorption of thioctic acid.

When taking the drug, the use of dairy products is not recommended (because of the calcium content in such products). The interval between taking thioctic acid and consuming dairy products should be at least 2 hours.

Several cases of the development of the autoimmune insulin syndrome in patients with diabetes mellitus have been recorded against the background of the thioctic acid treatment, which was characterized by frequent hypoglycemia in the presence of autoantibodies to insulin. The possibility of the autoimmune insulin syndrome development is determined by the presence of HLA-DRB1*0406 and HLA-DRB1 * 0403 haplotypes in patients.

SIDE EFFECTS:

The frequency of side effects is given in accordance with the WHO classification:

very often - ≥1 / 10;

often - from ≥1 / 100 to <1/10;

infrequently - from ≥1 / 1000 to <1/100;

rarely - from ≥1 / 10000 to <1/1000;

very rarely - <1/10000.

Gastrointestinal tract: often - nausea; very rarely - epigastric burning, vomiting, diarrhea, abdominal pain.

Immune system: very rarely - allergic reactions - urticaria, skin rash, itching; systemic allergic reactions (up to the development of anaphylactic shock); frequency unknown - autoimmune insulin syndrome in patients with diabetes, which is characterized by frequent hypoglycemia in the presence of autoantibodies to insulin.

Skin and subdermal tissue: frequency unknown - eczema.

Nervous system: often - dizziness; very rarely - taste disturbance.

Metabolism and nutrition: very rarely - the development of hypoglycemia (because of the improved glucose utilization), symptoms of which include dizziness, increased sweating, headache, and visual disorders.

OVERDOSE:

Symptoms: headache, nausea, vomiting. In case of acute overdose (when using 10-40 g of the drug), serious signs of intoxication can be manifested (generalized convulsive seizures; severe disturbances in the acid-base balance leading to lactic acidosis; hypoglycemic coma; severe blood coagulability disorders, sometimes leading to the fatal case).

If you suspect a significant overdose of the drug (doses equivalent to more than 10 tablets for an adult or more than 50 mg / kg body weight for a child), immediate hospitalization is necessary.

Treatment: symptomatic (including gastric lavage, intake of activated charcoal), if necessary anticonvulsant therapy, measures to maintain vital functions. No specific antidote exists. Hemodialysis is not effective.

INTERACTION WITH OTHER DRUGS:

In case of the simultaneous use of thioctic acid and cisplatin, a decrease in the effectiveness of cisplatin is recorded.

Thioctic acid binds metals, so it should not be used simultaneously with preparations containing metals (for example, iron, magnesium, calcium medications), as well as with dairy products (because of their calcium content); the interval between taking such drugs and thioctic acid should be at least 2 hours.

In case of the simultaneous use of thioctic acid and insulin or oral hypoglycemic drugs, their effect may be enhanced.

Thioctic acid enhances the anti-inflammatory effect of glucocorticosteroids. Ethanol and its metabolites weaken the effect of thioctic acid.

PREGNANCY AND LACTATION:

The use of thioctic acid during pregnancy is contraindicated in the absence of sufficient experience. Studies of reproductive toxicity did not reveal any risks regarding the effect on the development of the fetus and any embryotoxic properties of the drug. It is not known whether thioctic acid penetrates into breast milk. If it is necessary to use the drug during the period of breastfeeding, breastfeeding must be stopped.

INFLUENCE ON THE ABILITY TO DRIVE VEHICLES AND OPERATE MECHANISMS:

The influence on the ability to drive vehicles and operate mechanisms has not been systematically studied. Care must be taken when driving vehicles and engaging in potentially hazardous activities that require increased concentration of attention and speed of psychomotor reactions.

STORAGE CONDITIONS:

Store in a dry place, at a temperature not exceeding 25 °C (77 °F) in the manufacturer's packaging. Keep out of the reach of children.

SHELF LIFE: 2 years. Do not use beyond the expiration date.

MANUFACTURER: Canonfarma Production CJSC, Russia. https://canonpharma.ru/en/