

**SIDE EFFECTS AND CONTRAINDICATIONS OF DRUGS
USED IN ATHEROSCLEROSIS**

Ergashov Bekhruzjon Komilovich

Intern assistant at Asian

International University, Bukhara, Uzbekistan

ORCID ID 0000-0003-4613-0057

Abstract

Classification of drugs used in atherosclerosis, the mechanism of action of drugs, and determination of side effects and contraindications of drugs.

Key words: Statins, Side effects, contraindications, Fibrates, Bile acid sequestrants.

Medicines widely used in atherosclerosis:

Statins (GMG - CoA-reductase (hydroxyl methyl glutaryl coenzyme A reductase) inhibitors) belong to a new class of monokalins with a pronounced hypolipidemic effect. They are the only group of hypolipidemic drugs that have been proven to reduce the number of deaths from CHD and prolong the life of patients with atherosclerosis. The mechanism of action consists in inhibiting the enzyme GMG-CoA-reductase, which is involved in the production of cholesterol in liver cells. As a result, cholesterol production by hepatocytes and its amount in cells decreases. This led to a compensatory increase in the number of PZLP-receptors, as well as their capture and release (used for processes necessary for the body) in the blood. Also, the metabolism of another type of LP, the content of which is apo-B protein, recognized by the PZLP receptor in the hepatocytes, is also enhanced. In addition, GMG-CoA reductase inhibitors reduce cholesterol esterification in various tissues, including enterocytes, hepatocytes, and vascular wall cells. It causes absorption of cholesterol in intestines, secretion (production) of JPZLP, filling of macrophages with lipids, formation of foam cells, decrease in proliferation of smooth muscle cells, and regulation of increased aggregation of platelets. As a result, the size of atherosclerotic plaques decreases and stabilizes, and the risk of rupture and formation of pre-thrombus decreases.

Statins, usually. From 10-20 mg (up to 80 mg) once a day. It is recommended to drink y< twice (morning and evening) after meals. Since the rate of XS biosynthesis is very high during sleep, it is advisable to take the drug in the evening. If the desired result is not achieved, the amount of the drug is increased every 4 weeks. If the PZLP indicator falls below 2.6 mmol/l (100 mg/dl), the dose of the drug is reduced. During maintenance treatment, monitoring of lipid metabolism indicators is carried out for a long time.

Side effects. In some cases (1-2%) patients taking statin have the following side effects: .. ,.

- Abdominal discomfort, diarrhea, constipation, nausea, abdominal pain;
- Headache, dizziness; he r- -
 - Muscular tension, myalgia, myositis;
- Changes in functional tests of the liver;
- Restlessness, sleep disturbance, change in sense of taste, skin itching;
- Teratogenic effect. The listed side effects are temporary and disappear when the amount of the drug is reduced or its administration is stopped.

Contraindications

Contraindications

- There is an active pathological process in the liver or its enzymes are high
- Pregnancy and breastfeeding;
- Hypersensitivity to the components of the drug.
- In patients with severe general condition, including acute infection. treatment with statins is stopped in case of arterial hypotension, large-scale surgical procedures, injuries, severe metabolic, endocrine or electrolyte disorders.

Fibrates. Fibric acid products (fibrates) are mainly used in the treatment of GLP with a high level of TG, i.e. its types 1, III, IV, V.

Mechanism of action of fibrating. PZLP consists in enhancing the activity of degrading lipoprotein lipase. In addition, fibrates slightly increase the amount of YZLP and apo-AI, apo-AII in the blood. Under their influence (except for gemfibrozil), the amount of fibrinogen and platelet aggregation decreases, and the activity of fibrinolysis increases. Gemfibrozil, fenofibrate, basofibrate ciprofibrate and other representatives of fibrates are used in practice.

In the treatment of patients with atherosclerosis and GLP, the clinical effect of fibrate is less than that of statins. Long-term treatment with fibrates leads to a decrease in the amount of TG by 28-38%, and an increase in the level of YZLP by 8-9%. At the same time, the total amount of XS and PZLP does not change or decreases slightly (6-10%). These changes, according to scientific sources, reduce mortality from CHD by up to 34%. At this point, it should be remembered that treatment with fibrates in patients with type IV GLP can lead to an increase in the total amount of XS and PZLP in the blood.

Side effects:

- myalgia, myopathy, muscle weakness with increased CK in the blood;
- An increase in the lithogenic index and the formation of stones in the bile ducts;
- Abdominal pains, nausea. anorexia, flatulence, constipation;
- Increased activity of liver enzymes;
 - Headache, fainting. paresthesias, dizziness, drowsiness, depression,

decreased libido, hypotension;

- Allergic reactions on the skin;
- Anemia, leukopenia (in rare cases).

Contraindications: \ .

- Liver or kidney failure;
- Gallstone disease, chronic cholecystitis, primary biliary cirrhosis;
- Pregnancy and breastfeeding;
- Hypoproteinemia;
- Hypersensitivity to drugs.

Bile acid sequestrants. Currently, drugs of this group are used as adjuncts to enhance the hypolipidemic effect of statin or fibrate. Also, they are prescribed when there are contraindications to prescribing the above two groups of drugs. Bile acid sequestrants bind bile acids in the intestine, reduce bile reabsorption and increase excretion with feces. As a result, compensatory, the synthesis of bile acids from XS in the liver increases and the amount of flour in hepatocytes decreases. This, in turn, leads to an increase in the activity of PZLP receptors in liver cells. As a result, the process of excretion of ulamine slows down, and its concentration in the blood decreases.

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