

PROSPECTS FOR CREATION OF HOMEOPATHIC MEDICINE FOR ARRHYTHMIAS TREATMENT

Herasymova I.V., Yurieva G.B., Yarnykh T.G., Chushenko V.M.

National University of Pharmacy, Kharkiv, Ukraine

Technology of Drugs Department

tl@nuph.edu.ua

At present there is an objective deterioration in the health of the population. It forces people to independently look for means of combating illnesses both in the field of official medicine and outside of its field. One of the promising medical directions is homeopathy, which, despite recognition, still does not have the status of a clinical specialty. At present, attention is being paid to non-traditional treatments, in particular, homeopathy. According to WHO, Australia, Europe and North America, along with allopathic medicine are increasingly using complementary and alternative medicine, one of which is the homeopathy.

Pharmaceutical market in Ukraine actively updated with new homeopathic remedies used mainly by patients for the treatment of various chronic diseases.

The current arsenal of homeopathic medicines in the pharmaceutical market of Ukraine is about 200 of homeopathic medicines. Update of the range of homeopathic medicines in the domestic market is mainly due to the registration of new drugs. The main producers of homeopathic medicines presented in the domestic pharmaceutical market is well-known companies of Germany, Austria, Great Britain, French, Canada, USA, etc. The share of imports in the market is 81%, and domestic drugs – 19%.

After analyzing the nomenclature of homeopathic medicines, one can see that the largest number of drugs affect the respiratory and cardiovascular systems, and make up 28% and 18%, respectively.

The shape release homeopathic medicines are pills, granules, solutions for injections, oral drops, syrups, species in filter bags, rectal suppositories, homeopathic solutions, nasal sprays, ointments (gels) etc. Solid dosage forms account for the largest proportion of drugs – 52% of the range. In liquid form has 43% range, soft – 4%, spray – 1%. Note also that homeopathic medicines of domestic manufacturers are mainly solid form (granules). Also, it concerns homeopathic medicines, which imported from neighboring countries. Given the foregoing and the fact that homeopathy treatments are used extensively, and arsenal of medicines gradually replenished, it can be note that the market for homeopathic drugs is a promising, attractive and should actively promoted by manufacturers for development in Ukraine.

It is necessary to pay attention to the fact that recently the need for cardiological preparations has increased. Including drugs that normalize the rhythm of the heart. Of course, we can talk about the extreme relevance of the creation of new drugs, in particular, homeopathic for the treatment of this pathology.

Arrhythmias of the heart is a violation of the frequency, rhythm and / or sequence of heartbeats: a change in the frequency, regularity, violation of the conduct of impulses.

The incidence of arrhythmias is from 5 to 80 cases per 1000 child population; using round-the-clock (Holter) monitoring of heart rhythm of various arrhythmias and blockades in some intervals are more than half of healthy children. It is noted that the incidence of cardiac arrhythmias cannot be accurately count; there is virtually no disease, which would have been observed arrhythmias and hard to find someone who would not have, for example, extrasystole in a given period of life.

All arrhythmias are divided into: automatism dysfunction – sinus tachycardia, bradycardia, arrhythmia and migration source rhythm; asystole; dysfunction excitability – beats, paroxysmal and non-paroxysmal tachycardia; combined arrhythmia.

Acute arrhythmias and conduction of the heart can complicate the course of various diseases of the cardiovascular system: coronary heart disease (including myocardial infarction and post-infarction cardiosclerosis), hypertension, rheumatic heart disease, hypertrophic dilatation and toxic cardiomyopathy, mitral valve prolapse, etc.

Any electrophysiological mechanisms are possible at the heart of arrhythmia disorders, in particular, automatism disturbance, excitation wave circulation, trigger activity in the form of early and late post-depolarization (torsades de pointes, extrasystole).

Rhythm and conduction disturbances can occur both asymptotically and with vivid symptoms, ranging from palpitations, interruptions in the work of the heart, and ending with the development of severe arterial hypotension, angina pectoris, syncopal states and manifestations of acute heart failure.

Most often, arrhythmias have a feeling of heart failure, increased heartbeat, extremely fast or, conversely, slow heartbeat, dizziness, shortness of breath, chest pain, feeling of «failure» of the earth under your feet, nausea and / or vomiting, loss of consciousness.

These various manifestations of arrhythmias are not always talk about the complexity of arrhythmias. People with minor arrhythmias may lose consciousness, and those patients who have really a life threatening arrhythmias do not complain.

For the treatment of this pathology prescribed antiarrhythmic drugs, for the manufacture of which synthetic and natural substances are used. At the same time, with respect to the latter, a special interest is noted that even with prolonged use they do not cause undesirable consequences from the main body systems (Table 1).

Table 1

Classification of antiarrhythmic drugs (Singh, Willams (1972))

Name of medicines	Electrophysiological mechanism of action
A. Quinidine, Novokainamid, Dyzopiramid (Ritmilen) B. Lidocaine, Mexiletine, Aymalin C. Propafenone, Etatsyzin	Slow down the 0 phase of depolarization, extend the active refractory period, slow down the conductivity of the atrioventricular connection
B-blockers receptors: Anapeilin, Obzidanom, Atenolol	Slow down depolarization phase, slow conduction through the atrioventricular node
Amiodarone bretylium	Increases action potential and refractory period of myocardial fibers
Calcium channel blockers: Verapamil (Finoptin) Nifedipine (Nefanhin)	Prolong a phase depolarization and repolarization. Slow atrioventricular conduction

After analyzing the epidemiology of cardiac arrhythmias, the pharmaceutical market of Ukraine antiarrhythmic drugs, and also, given the feasibility of using raw materials of natural origin due to its safety of use and a relatively low number of side effects, it was proved the need to create domestic homeopathic medicines for the treatment of given pathology.

References

1. Randomised placebo-controlled trials of individualised homeopathic treatment: systematic review and meta-analysis / RT Mathie, SM Lloyd, LA Legg et al // Systematic Reviews – 2014. – № 3. – P. 142.
2. Khokhlenkova N.V Development of ointment composition with dense oak bark extract / N. V. Khokhlenkova, T. G. Yarnykh, M. V. Buryak // Research J. Pharm. and Tech. – 2013. – Vol. 6(7). – P. 715-717.