

24<sup>th</sup> World Congress on **Pharmacology**  
&  
**7<sup>th</sup> World Heart Congress**

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**Effectiveness of combine therapy using Allapinin and cardiac glycosides for suppression of supraventricular paroxysmal tachyarrhythmias in patients with ischemic heart disease**

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**P**aroxysmal atrial fibrillation and paroxysmal supraventricular tachycardia can be treated using several preparations. Author of this abstract has developed the new method of treatment for paroxysmal supraventricular tachyarrhythmias including such disorder of cardiac rhythm in patients with severe heart failure. In accordance with this method combination of preparations with antiarrhythmic action (allapinin + cardiac glycosides) is used.

Allapinin is the alkaloid of bromhydrate lappaconitine. This alkaloid was extracted from the perennial plant. It can be extracted from the wild plant of the aconite, which belongs to the group of buttercup plants. It is produced in tablets at 50 mg and in solution for intravenous or intramuscular administration: 1% solution in ampoules at 2 ml. Allapinin occupies the special place among antiarrhythmic agents of the 1st class according to Vaughan-Williams classification. It differs from agents of IA and IB subclass. Being different from quinidine, procainamide, gilurytmal and others agents of the 1st class of antiarrhythmic drugs allapinin in effective antiarrhythmic doses has small influence on the width of ventricular QRS complex, P-Q interval and Q-T interval. Allapinin in doses, which provide denominated antiarrhythmic effect, unlike the other antiarrhythmic drugs, does not lead to reduction of the system arterial pressure and to negative inotropic action in myocardium fibers.

In accordance with the new method of treatment of paroxysmal supraventricular tachyarrhythmias a cardiac glycoside – digoxin (lanoxin) in dose 0,25 mg or strophanthin in dose 0,25 mg is administered intravenously. Then in 20-30 minutes after administration of cardiac glycoside allapinin is used intravenously in dose 30-40 mg

In case of suppression of paroxysmal tachyarrhythmia prophylactic treatment must be administered using the above preparations. Allapinin is administered orally in daily dose 75 mg (25 mg 3 times daily). In combination with allapinin digoxin is used orally in dose 0,25 mg (1 tab) 1-2 times daily. In case of positive result of therapy the daily dose of allapinin can be reduced to 50 mg (1 tablet 2 times a day) and digoxin - to the minimum effective one, which is 0,25 mg (1 tablet) once a day.

The criterion of such positive result of therapy is occurrence of the periods without paroxysms of tachyarrhythmia, which are greater than 1,5-2 periods. Such periods occurred earlier between paroxysms of tachyarrhythmia. Thus, this therapy provides prophylactic effect in respect to occurrence of tachyarrhythmia attack.

The significant advantage of this method is the possibility of using it for the patients with severe heart failure. Unlike the majority of other antiarrhythmic drugs of synthetic origin allapinin does not have any negative inotropic action in effective antiarrhythmic doses. For the patients with cardiac failure this cardiac glycoside leads to improving of metabolism in myocardial cells. Such improvement of myocardium metabolism contributes to the elimination of paroxysmal tachyarrhythmias.

The most expressive effect of combined therapy is observed in case of intravenous administration of allapinin in single dose 30-40 mg and cardiac glycoside in 20-30 minutes after using allapinin. Such combination of these agents is conditioned by their pharmacodynamics. The beginning of antiarrhythmic effect occurred only in 10-15 minutes after its intravenous administration. The maximal effect of allapinin is achieved in 20-40 minutes after using this antiarrhythmic drug. This property of allapinin is conditioned by the time of intravenous administration of cardiac

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glycoside. Such therapy was realized with 37 patients having ischemic heart disease and supraventricular paroxysmal tachyarrhythmias. They were included in the main group of patients.

To control the effectiveness of the combined therapy the monotherapy only using intravenous administration of allapinin in single dose 40-50 mg was realized with 38 patients having ischemic heart disease and supraventricular paroxysmal tachyarrhythmias.

The therapy results in the main and in the control group of patients are submitted in the table.

Table

No	Form of paroxysmal tachyarrhythmia	Number of patients in main group	Positive result of therapy	Number of patients in control group	Positive result of therapy
1.	Paroxysmal supraventricular tachyarrhythmia	16	12	15	8
2.	Paroxysmal form of atrial fibrillation	14	11	15	7
3.	Paroxysmal form of atrial flutter	7	5	8	3

The use of cardiac glycoside increases the antiarrhythmic effect of allapinin. This combined treatment is more efficient in comparison with the monotherapy with the help of only one preparation (allapinin). Such combined use of these two medicines contributes to shortening of the time, which is needed for suppression of tachyarrhythmia paroxysm. After the renew of the normal sinus rhythm the supporting treatment (oral administration of allapinin and cardiac glycosides) must be administered in the earliest possible period.

**Notes:**