



Coraxan Use in Patients with Cardiovascular and Pulmonary Pathology

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Abstract: The article studies the efficacy of the drug Coraxan in the complex therapy of patients with coronary heart disease (CHD) and arterial hypertension (AH) in combination with chronic obstructive pulmonary disease (COPD). The use of Coraxan in the treatment of patients with combined cardiopulmonary pathology leads to a significant decrease in blood pressure (BP) and heart rate (HR), reduction of angina attacks. Coraxan increases tolerance to physical activity (PA).

Keywords: Coraxan, ischemic heart disease, blood pressure, arterial hypertension, chronic obstructive pulmonary disease, heart rate, physical load.

Currently, the problem of associated pathology of COPD and CHD, AH should be considered not only as a combination of different diseases, but also as a mutually aggravating condition with common pathogenetic links. The incidence of both cardiovascular and bronchopulmonary pathology is steadily increasing worldwide [1, 2]. The leading cause of mortality in patients with COPD is not respiratory failure, but cardiovascular disease events (CDE), which are found in at least 50% of COPD patients, while the presence of the latter increases the risk of CVD by 2-3 times [3, 5]. Today there are three groups of drugs for HR control: β -adrenoblockers (β AB), nondihydropyridine calcium channel blockers and IFinhibitors. The leading place in the treatment of CD rightfully belongs to β AB [6, 7]. In accordance with the recommendations of the European Society of Cardiology and national recommendations, for the treatment of patients with stable angina pectoris in the presence of contraindications to β AB administration it is recommended to use a new treatment strategy - the use of IF-channel inhibitors, the only representative of which is ivabradine (Coraxan, Servier, France), which has a fundamentally new antianginal mechanism of action [4, 6]. Purpose of work: study of the therapeutic efficacy of Coraxan in complex therapy (CT) of patients with CHD and AH combined with COPD.

Materials and methods

Fourteen patients aged 53-70 years with COPD of II-III degree in the exacerbation stage were examined. Stable angina IIIII FC and AH stage II were registered in all patients. Risk IV. 89 Patients



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received baseline therapy (nitrates, angiotensin receptor blockers (ARBs), inhaled bronchodilators, diuretics, antibiotics, mucolytics) and Coraxan 7.5 mg 2 times/day (IF-inhibitor of selective and specific action - ivabradine) for 8 days. The study program included daily assessment of BP, HR, number of respiratory movements (HR), pulse oximetry - SPO₂, six-minute walk test (SHT). Spirography. ECG and ECHOG were performed on admission to the hospital and after 8 days.

Results and discussion

A decrease in BP was noted at daily registration. The level of systolic BP (CAD) decreased by 16%, diastolic BP (DBP) by 15%. There was a significant decrease in HR (on average by 6-7 beats/min.) HR 4-6 times in 1min. Increase of peripheral blood saturation by 96% was revealed. The distance traveled by the patients before treatment averaged 246 ± 90 m, after treatment 275 ± 94 m. We found an increase in all indices of external respiratory function (ERF): vital capacity of lungs (VCL) increased by 4.5%, forced vital capacity of lungs (FVCL) - by 3.8%, forced expiratory volume (FEV₁) - by 8.2% (Table 1)..

Table 1. Dynamics of spirometry indices

| Indicators | On admission to the hospital | At hospital discharge (after 8 days) |
|------------------|------------------------------|--------------------------------------|
| OFV ₁ | $55,4 \pm 8,2\%$ | $65,3 \pm 9,8\%$ |
| FGYOL | $66,3 \pm 11,8\%$ | $68,5 \pm 13,6\%$ |
| ZHYOL | 2650 ± 180 | 3050 ± 220 |

According to ECHOCG data, there was a tendency to improvement of intracardiac hemodynamics parameters: left atrium (LA) decreased by 2.5%, left ventricular end-diastolic dimension (LVED) by 4.4%, left ventricular end-systolic dimension (LVESD) by 7%, right atrium by 3.4%, ejection fraction (EF) increased by 8%. Right ventricular diastolic function improved: E/A decreased before treatment 1.1 ± 0.04 , after treatment 0.81 ± 0.03 . Thus, the use of Coraxan in CT patients with combined cardiopulmonary pathology leads to a significant decrease in BP and HR, decrease in angina attacks, increase in tolerance to FN. Coraxan moderately affects FDV and improves intracardiac hemodynamics.

Literature

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