

THE EFFECTIVENESS OF CPAP THERAPY IN PATIENTS WITH CARDIOGENIC PULMONARY EDEMA

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Relevance. Alveolar cardiogenic pulmonary edema (COL) is a life-threatening complication of a number of diseases, most often associated with impaired contractile function of the heart. In the Russian Federation, pulmonary edema remains one of the most severe urgent therapeutic conditions requiring immediate hospitalization of the patient and emergency medical measures.

In 22-26.6% of cases, pulmonary edema is a complication of acute myocardial infarction, mortality in this category of patients reaches 30%.

At the same time, 40-50% of patients who have suffered an acute condition die during the following year. With cardiogenic pulmonary edema, the gas exchange function of the lungs is disrupted, ventilation, dysfunction of the metabolism of electrolytes, water, and metabolism of biologically active substances occurs. As a result of the above pathological processes, water is deposited in the extravascular space of the lungs and acute respiratory failure develops.

The management of patients with pulmonary edema in combination with acute respiratory failure (ODN) is one of the most difficult tasks of medicine. Drug treatment and oxygen therapy in some cases turn out to be ineffective. Even when the compensatory mechanisms of external respiration are strained, the body cannot maintain normal blood gas composition.

The purpose of the study. To study the effect of CPAP therapy on respiratory failure and hemodynamic disorders in AMI patients with cardiogenic pulmonary edema and to evaluate the effectiveness of non-invasive respiratory support in the complex treatment of the identified pathological condition.

Materials and methods of research. The study was published in 2021-2023 by 60 patients were studied from the Departments of the clinic of the Andijan State Medical Institute named after Yu.Otavekov.

Research results. The study included 21 patients (16 men, average age 63.24 ± 7.46 years). According to the localization of LV myocardial necrosis, acute transmural anterior wall MI was registered in all patients, the duration of the disease was more than 12 hours from the moment of the anginal attack, which excluded the possibility of thrombolytic therapy. The leading clinical symptom in patients was dyspnea of 8.48 ± 0.93 points (Borg, 1982). On examination, diffuse cyanosis was observed in 21 (100%) patients, acrocyanosis in 19 (90%) patients. With cardiac auscultation, protodiastolic gallop rhythm was heard in 18 (86%) and a second tone accent over the pulmonary artery in 17 (81%) of patients. With lung auscultation, bilateral moist multi-caliber wheezing over all pulmonary fields was heard in 14 (67%) and in 7 (33%) patients with more than 50% of lungs. In the study group, hypotension was detected ($AD_{sist} = 10.10 \pm 6.98$ mm Hg), sinus tachycardia (heart rate = 113.95 ± 41 beats/min), low-filling pulse, tachypnea ($BHD = 30.43 \pm 4.46$ breath/min). All patients had a decrease in diuresis to 20 ml/hour.

According to the analysis of the gas composition of arterial blood, patients had pronounced hypoxemia ($PaO_2 = 49.7 \pm 7.75$ mmHg), hypocapnia ($PaCO_2 = 31.81 \pm 5.31$ mmHg), respiratory alkalosis ($pH = 7.48 \pm 0.05$) and a decrease in $SaO_2 = 80.57 \pm 3.74\%$.

According to the central hemodynamics data, all patients were characterized by a decrease in the cardiac index (CI) and an increase in the pressure of jamming in the pulmonary artery (PAWP). According to the classification of OSN in myocardial infarction, taking into account hemodynamic parameters, patients belonged to the second hemodynamic group (pulmonary congestion).

Conclusions. 1. CPAP therapy significantly improves the clinical performance of patients with cardiogenic pulmonary edema who do not respond well to medication and oxygen therapy, as evidenced by a decrease in shortness of breath and tachypnea 30 minutes after the start of ventilation, an increase in average blood pressure and a decrease in tachycardia by the 60th minute

2. Complex therapy, including non-invasive respiratory support for patients with cardiogenic pulmonary edema, significantly improves the gas composition of arterial blood, increases the indices of oxygenation and oxygen delivery to tissues, reduces venous "mixing" of blood.