

Effectiveness of early respiratory and inhalation therapy on the respiratory status of cardiosurgery patients with COPD exacerbation

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Introduction: Patients who undergo heart surgery with a diagnosis of chronic obstructive pulmonary disease (COPD) can more easily develop pulmonary dysfunction in the sense of an acute exacerbation of COPD, defined as worsening dyspnea, increased volume and infection of sputum, increased cough, increased breathing frequency, or heart rate.¹ All the listed symptoms represent a postoperative complication and cause the need for more intensive help and specific treatments. Over the years, different strategies have been developed for lung rehabilitation. The clinical application of early respiratory therapy with all related techniques, in combination with inhalation and other pharmacological therapy, can influence the positive outcome of the patient's recovery.²

Case report: A patient with coronary heart disease and COPD was selected from the register of the Institute for Cardiac and Transplantation Medicine, University Hospital Dubrava, who developed symptoms of exacerbation of COPD after heart surgery in the period from September 5 to September 22, 2023. The analysis included the influence of Cipla inhalation therapy and early respiratory therapy on the implementation of the respiratory program and the results of the patient's respiratory status. Postoperative exacerbations of COPD were recorded in the patient within 72 postoperative hours. Clinical signs were worsening dyspnea, infectious secretions, and an increased respiratory rate. Radiological and laboratory findings showed a specific pattern of exacerbation. Prescribed inhalation therapy with Cipla x6 over 24 hours or 3 days, later x4 or 4 days, bronchodilators, and increased lung rehabilitation 3x a day improved the patient's respiratory status.

Conclusion: Timely treatment of acute exacerbations of COPD after cardiac surgery with increased use of inhalation therapy in combination with respiratory therapy can stabilize the patient and reduce lung respiratory dysfunction.

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LITERATURE

1. Niewoehner DE, Lokhnygina Y, Rice K, Kuschner WG, Sharafkhaneh A, Sarosi GA, et al. Risk indexes for exacerbations and hospitalizations due to COPD. *Chest.* 2007 Jan;131(1):20-8. <https://doi.org/10.1378/chest.06-1316>
2. Gaensler EA, Wright GW. Evaluation of respiratory impairment. *Arch Environ Health.* 1966 Feb;12(2):146-89. <https://doi.org/10.1080/00039896.1966.10664355>