

## **PNEUMONIA AND CARDITIS IN CHILDREN: COMPLEX IMPACT ON PROGNOSIS**

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*Mukhammadiev Ismail Sulaimanovich*

*Student, Faculty of Pediatrics,*

*Shavazi Ramiz Nuralievich*

*Second-year Master's student, Department of Surgical*

*Diseases №2 Samarkand State Medical University*

*Uzbekistan, Samarkand*

**Background.** Severe and protracted pneumonia is often associated with comorbidities. These conditions significantly alter the disease's manifestations, reduce the effectiveness of standard treatments, and worsen the prognosis. In this context, inflammatory cardiovascular diseases, particularly carditis, are among the most unfavorable factors contributing to the development of exacerbation syndrome.

**Study Objective:** To investigate the impact of concomitant carditis on the clinical presentation, complication rate, and outcomes of pneumonia in children.

**Materials and Methods:** The study included 40 children with community-acquired pneumonia, who were divided into two comparison groups. The study group included 20 children with pneumonia associated with carditis, while the comparison group included 20 children with pneumonia without concomitant cardiac disease.

**Study Results:** The presence of carditis significantly increased the likelihood of severe pneumonia. Severe pneumonia was detected in 63.8% of children with carditis, compared to 35.5% in the group without cardiac problems ( $p < 0.01$ ). The predominance of moderate pneumonia in the comparison group indicates that cardiac involvement has a significant impact on the severity of the pulmonary inflammatory process. Stage II–III respiratory failure was recorded in 48.3% of children with carditis, which is significantly higher than the 22.6% rate in the comparison group ( $p < 0.05$ ). Patients with concomitant carditis had lower oxygen saturation values upon admission ( $92.1 \pm 2.4\%$  versus  $95.6 \pm 1.9\%$ ,  $p < 0.01$ ), indicating more severe hypoxemia.

**Conclusions.** The study results convincingly demonstrate that the presence of carditis in children with pneumonia significantly complicates the course of the disease. This is manifested in more severe respiratory and cardiovascular failure, an increased number of complications, and a longer hospital stay. Thus, early detection of cardiac damage in this group of patients is critical from both a clinical and prognostic perspective, as it helps improve outcomes.