

Congenital heart disease with hemodynamic repercussion and pulmonary hypertension as predictors of severity in children under five years hospitalized for acute respiratory infection.

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Introduction:

Acute respiratory infection is one of the main causes of hospitalization in childhood and represents one of the most important causes of mortality in children under 5 years of age. Respiratory complications increase in patients with congenital heart disease, especially in those with hemodynamic repercussion or pulmonary hypertension. The present study was conducted to establish the severity of acute lower respiratory tract infections in children under 5 years of age with congenital heart disease with hemodynamic repercussion or pulmonary hypertension in a pediatric reference hospital in Colombia.

Methods:

A cohort-type analytical study was conducted in children under 5 years hospitalized for respiratory infection who underwent an echocardiogram due to a history or suspicion of congenital heart disease or pulmonary hypertension in a pediatric referral hospital in Bogotá between August 2017 and June 2018.

Results:

A total of 217 patients were evaluated, of which 62 corresponded to the "exposed" group (congenital heart disease with hemodynamic repercussion or pulmonary hypertension) and 155 to the "unexposed" group. The multivariate analysis found that the exposed group was more likely to enter the PICU (RR 2,269) $P < 0,001$ with a difference of means in days of significant hospitalization ($P < 0,000$). As independent variables of admission to the PICU, infection by respiratory syncytial virus (RR 2.525 $P < 0.007$) and bacterial pneumonia (RR 3.046 $P < 0.000$) were found.

Conclusions:

The findings of this study are consistent with those reported in the international literature. The present study showed that children with acute lower respiratory tract infection had a higher risk of admission to the PICU and a longer hospital stay when they coexisted with congenital heart disease with hemodynamic repercussion or pulmonary hypertension. As a predictor of the severity of the respiratory infection, coinfection with respiratory syncytial virus and bacterial pneumonia was also found.