

TITLE: VIRAL IDENTIFICATION OF CHILDREN WITH COMMUNITY-ACQUIRED PNEUMONIA

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ABSTRACT:

Community-acquired pneumonia (CAP) is the leading cause of morbidity and mortality in children under five years of age worldwide, especially in developing countries. Several viruses are related to the CAP in children. Respiratory syncytial virus (RSV), adenovirus, rhinovirus and influenza virus are the most frequent viral cause of pneumonia in the Brazilian population. Therefore, the objective of this study was to identify the viral etiology of CAP in children up to ten years of age. A total of 150 children with PAC were selected in two clinical reference centers in children's health in São Luis, Maranhão and a sociodemographic and clinical data were obtained through a standardized questionnaire. In addition, samples of nasopharyngeal aspirate and tracheal secretion were collected. The DNA/RNA was extracted using the QIAamp MinElute Virus Spin Kit and after obtaining the cDNA using the High-Capacity cDNA Reverse Transcription kit the qPCR/RT-PCR was performed for viral identification. Of the 150 children with CAP, twenty-three (15.3%) were children with severe pneumonia and one hundred twenty-seven (84.7%) were in non-severe form. It was observed that the largest number of cases occurred in children up to 60 months of age (89.3%); of these, 73.9% were children aged 3-12 months with severe CAP, compared to children with non-severe CAP that Majority (53.5%) were 13-60 months and only 11% aged 61 - 120 months, $p = 0.002$. Rhinovirus was the most frequent pathogen identified in 44/150 (29.3%) of the patients, followed by the adenovirus with 9/150 (6%) cases, RSV with 9/23 (6%) and 3/23 influenza A (2%). It was also observed that rhinovirus was the main virus found in children with non-severe CAP. However, RSV and influenza A were the major viruses related to severe CAP in children. With this, our findings reinforce that age is a risk factor for Community-acquired pneumonia.

Keywords: pneumonia, virus, children

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