

Respiratory Viral Infections and Coinfections in Children With Cancer, Fever and Neutropenia Clinical Outcome of Infections Caused by Different Respiratory Viruses

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Resumen

Background: Respiratory viral infections in episodes of fever and neutropenia (FN) in children with cancer are not well characterized. We compared the clinical outcome of infections caused by different respiratory viruses (RVs) and by RV coinfection in this population.

Methods: Children with cancer and FN at 3 hospitals in Chile were prospectively evaluated by clinical examination, blood cultures and detection of 17 RVs using multiplex polymerase chain reaction (nasopharyngeal samples). Clinical characterization and outcome variables were determined and compared by the type of RV detected.

Results: A total of 1044 episodes of FN in 525 children were included. At least 1 RV was detected in 46%. In 350 of 1044 (34%) episodes, we detected only RVs, of which 284 (81%) were classified as a single-RV infection and 66 (19%) as a viral coinfection. Respiratory symptoms were present at admission in 65% of the episodes with any detected RV. Median age was 6 years (interquartile range, 3-10), and 51% were women. The most common RVs detected were rhinovirus, respiratory syncytial virus, parainfluenza, influenza, adenovirus and human metapneumovirus. Episodes caused by different types of RVs had no differences in the clinical outcome (days of hospitalization, days of fever, O-2 requirement, admission to the intensive care unit and death) and when comparing single and viral coinfection.

Conclusions: To our knowledge, this is the largest report comparing clinical outcome in FN episodes caused by different RVs in children with cancer. A positive polymerase chain reaction for RV at admission was significantly associated with the presence of respiratory symptoms. Our data

showed a favorable outcome in all episodes with RV detection, including single and viral coinfections.

Palabras clave

Palabras clave de autor:respiratory viral infection; febrile

neutropenia; coinfections; children; cancer

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