The impact of viral bronchiolitis phenotyping: Is it time to consider phenotype-specific responses to individualize pharmacological management?

Abstract

Although recent guidelines recommend a minimalist approach to bronchiolitis, there are several issues with this posture. First, there are concerns about the definition of the disease, the quality of the guidelines, the method of administration of bronchodilators, and the availability of tools to evaluate the response to therapies. Second, for decades it has been assumed that all cases of viral bronchiolitis are the same, but recent evidence has shown that this is not the case. Distinct bronchiolitis phenotypes have been described, with heterogeneity in clinical presentation, molecular immune signatures and clinically relevant outcomes such as respiratory failure and recurrent wheezing. New research is critically needed to refine viral bronchiolitis phenotyping at the molecular and clinical levels as well as to define phenotype-specific responses to different therapeutic options.