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Assessment of immune status in children under 5 years old with recurrent pneumonia at the National Hospital of Pediatrics, Hà Nôi, Vietnam

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Background: Pneumonia accounts for 10% of all hospitalizations for children less than 5 years old, increasing healthcare costs, morbidity (30-35%), and mortality (7-13%). Recurrent pneumonia occurs in 7-15% of children with pneumonia. Immunodeficiency may contribute to recurrent pneumonia in children. There has been no prior research about the prevalence of immunodeficiency in Vietnamese children with recurrent pneumonia.

Methods: Descriptive study of 80 children aged 6 months to <5 years with recurrent pneumonia (>2 episodes in a single year or >3 episodes ever, with radiographic clearing between occurrences) admitted to the VNCH Emergency Department from 9/2015-8/2017. Children with known immunodeficiency, immunosuppressive therapy, asthma, chronic lung disease or congenital heart disease were excluded. Patients with radiographic and clinically diagnosed recurrent pneumonia had quantitative assays of serum immunoglobulins, IgG subclasses, and T, B and NK lymphocytes.

Results: Mean chronologic age of 12.8+8.3 SD months; 60% were male; 11.2% were premature. Mean number of prior pneumonia episodes was 3.4+1.7 SD. On admission, medians for weight and height were 8+2.2kgs. Of the 80 patients, the following immunoglobulin deficiencies were noted: (3.8%), IgM (3.8%), IgG (2.5%) IgG1 (5%), IgG2 (1.2%), IgG3 (7.5%), IgG4 (11.2%). Other causes of recurrent pneumonia were airway abnormalities (6.2%), aspiration syndromes (11.2%) and gastroesophageal reflux (7.5%).

Conclusion: Immunodeficiency is an important cause of recurrent pneumonia in Vietnamese children. Assessment of children with recurrent pneumonia can facilitate diagnosing underlying primary immunodeficiency, thereby decreasing mortality and morbidity

Biography

Toan Ngoc Pham has completed his MD from Hanoi Medical University. He is a Senior Consultant in the Emergency and Poison Control Department of the Vietnam National Children's Hospital in Hànôi, Vietnam, a national-level tertiary referral center for northern Vietnam. He has studied risk factors for high acuity on admission to the emergency department (ED), gender disparities in care-seeking in Vietnamese children, and a comparison of AVPU and Glasgow coma scales in the management of pediatric encephalitis.

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