LETTER TO THE EDITOR

Serotype transition in invasive pneumococcal infection in postvaccine era

To the Editor,

*Streptococcus pneumonia* is the dominant pathogen of community-acquired pneumonia, particularly in children. Its serotypes are also associated with disease severity. Shen and colleagues reported a 10-year study, analyzing the relationship between serotypes and complications of invasive pneumococcal infection among pediatric patients in Taiwan. In this article, several points require further clarification. First, over 20% of patients in this study had underlying medical conditions, including malignancy, hematological disorders, genetic disorders, and other systemic illness. Although the number of patients with prior medical conditions were similar between groups, it was not discussed whether these children’s disease status and prior medical treatment records had been taken into account for the analysis. For example, a child with new-onset acute lymphocytic leukemia might have a much higher chance of developing invasive pneumococcal infection, compared with a child with glucose-6-phosphate dehydrogenase deficiency but without a significant medical history. Unless the physical status of these patients is similar, it is difficult to determine whether serotype 3 is more virulent than the others in this particular cohort. Second, this study included three children who had previously received polysaccharide pneumococcal vaccines. Because these children might preserve immune protection induced by prior vaccination, the virulence of certain vaccine serotypes might be underestimated. Finally, the description of total number was slightly unclear in several categories in Table 1. For instance, the overall number of patients in “requirement of ICU stay” was changed from 75 to 70 in case of 7-valent pneumococcal vaccine serotypes, and from 30 to 29 in case of non-7-valent pneumococcal vaccine serotypes. These changes need to be explained in detail. Apart from the issues raised above, this article addressed the importance to monitor the shift of leading epidemic serotypes of *Streptococcus*. The virulence of emerging serotypes should be more closely monitored in the postvaccine era.

References


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