Is immunoprophylaxis with palivizumab justified for respiratory syncytial virus?

Sir,

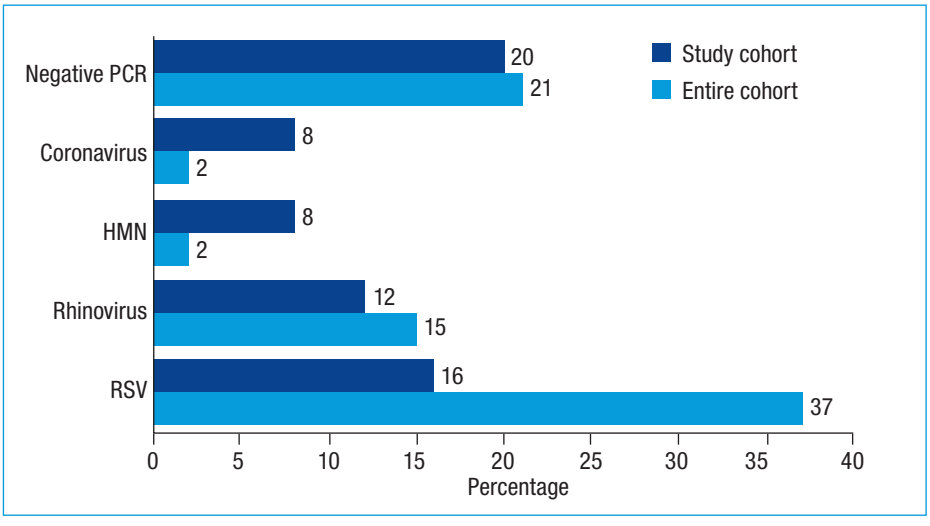
Use of palivizumab immunoprophylaxis to prevent respiratory syncytial virus infection in high-risk infants (oxygen-dependent term infants or those with chronic lung disease of prematurity, congenital heart disease or severe combined immunodeficiency syndrome) has been recommended by the Joint Committee on Vaccination and Immunisation (Public Health England, 2013). Palivizumab is administered during the respiratory syncytial virus season as monthly intramuscular injections starting from October until the end of February. The cost per infant each season is estimated to be £3000 (Public Health England, 2013).

The National Institute for Health and Care Excellence (2015) guidelines on bronchiolitis do not discuss or recommend the use of palivizumab and nasopharyngeal aspirate testing. The authors reviewed patients (n=69) who had received palivizumab over the previous four respiratory syncytial virus seasons (2013–14 to 2016–17). Outcome measures were prevention of hospitalization and reduction of morbidity caused by respiratory syncytial virus infection.

Thirty-five of 69 infants required hospitalization, accounting for 41 episodes. Nasopharyngeal aspirate testing was done in 25 out of 41 cases. Owing to a change of policy, the majority of admitted cases (n=13) from 2015 onwards did not have a nasopharyngeal aspirate performed. Four out of 25 nasopharyngeal aspirate samples were positive for respiratory syncytial virus. Unlike three out of 25 children who were rhinovirus positive or had a negative respiratory polymerase chain reaction, none from the respiratory syncytial virus-positive group needed transfer to paediatric intensive care unit. The average length of stay was 4 days. *Figure 1* highlights single viral pathogens (in percentages) detected in the study group as compared to the entire cohort (all children aged <2 years admitted with bronchiolitis to Torbay Hospital between 2012 and 2015) (Paul et al, 2017). Co-infections were identified in six out of 25 nasopharyngeal aspirates in the study group.

Respiratory syncytial virus-related bronchiolitis admissions accounted for 16% against 37% for the whole cohort in the authors' unit (Paul et al, 2017). Administering palivizumab to high-risk infants to reduce hospitalization and associated morbidities therefore seems justified.

Figure 1. Comparison of single viral pathogens (percentages). HMN = human metapneumovirus; PCR = polymerase chain reaction; RSV = respiratory syncytial virus.



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