

Response to pneumococcal polysaccharide vaccine in children with asthma, and children with recurrent respiratory infections, and healthy children

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Resumen

Background: To analyse specific immune response to the 23-valent pneumococcal polysaccharide vaccine by measuring pneumococcal antibodies in children with asthma and with respiratory recurrent infection (RRI) as compared to healthy children.

Methods: The study included 60 children, divided into three groups: 20 with asthma, 20 with RRI, and 20 healthy controls. Post-vaccination specific IgG antibodies against 10 pneumococcal serotypes (S1, S3, S4, S5, S6B, S9V, S14, S18C, S19F, and S23F) contained in the 23-valent pneumococcal polysaccharide vaccine (PPV) were measured. A specific IgG concentration ≥ 1.3 $\mu\text{g/mL}$ was considered a protective response to the vaccine. For statistical analysis, levels of specific IgG antibodies against each of the 10 pneumococcal serotypes were compared across the three groups of children using the χ^2 test.

Results: All of the children showed antipneumococcal antibody levels >1.3 $\mu\text{g/mL}$ for over 70% of the serotypes, considered within the normal range of response. Average IgG antibody levels and percentages of children protected were statistically comparable among the three groups studied.

Conclusion: The asthmatic children without RRI had pneumococcal antibody levels and percentages of serotype-specific protection to PPV comparable to those of healthy children. Asthmatic children with recurrent infections should be evaluated for specific antibody deficiency (SAD). Because asthma patients are at high risk for invasive pneumococcal infections, it would be worthwhile to explore systematic administration of PPV in children over the age of two years who have not received a pneumococcal conjugate vaccine, considering the positive response to PPV reported here. (C) 2016 SEICAP. Published by Elsevier Espana, S.L.U. All rights reserved.

Palabras clave

Palabras clave de autor: Asthma; Antibody deficiency syndrome; Pneumonia; Pneumococcal polysaccharide vaccine; Recurrent respiratory infections

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Editorial

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