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Pediatric cases caused by *Streptococcus pneumoniae* Serotype 3

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ABSTRACT

Streptococcus pneumoniae causes invasive pneumococcal disease (IPD), leading to high morbidity and mortality worldwide. Although nonvaccine serotypes constitute a major issue in the aspect of invasive pneumococcal disease, serotypes included in PCV13 still continue to be a problem. Vaccination with very high coverage and multicenter surveillance studies would be beneficial to decrease carriage of vaccine and nonvaccine serotypes of pneumococcus and monitor changing seroepidemiology.

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invasive pneumococcal disease; serotype 3; pediatric

To the Editors,

We read the article by Wantuch et al¹ regarding effects of pneumococcal conjugate vaccine on serotype changes with great interest. In this article it was stated that a decrease in incidence of vaccine type pneumococcal serotypes, increases in non-vaccine serotypes of the bacteria have been observed along with serotype switching. Although nonvaccine serotypes constitute a major issue in the aspect of invasive pneumococcal disease, serotypes included in PCV13 still continue to be a problem. To support this opinion we report 8 children infected with *Streptococcus pneumoniae* Serotype 3 in last 4 years. Of these patients, 7 had pneumonia and 1 had meningitis, 6 were vaccinated according to NIP (patients were fully vaccinated and age of the 6 patients ranged between 20 months-2 years). Also in the study by Silva-Costa et al.², the most frequent serotype was serotype 3, responsible for 36% of the cases (n = 40), among the 22 children age-appropriately vaccinated with PCV13, 19 had infections caused by serotypes included in PCV13(11 had serotype 3), representing vaccine failures.

Invasive pneumococcal disease is a major cause of morbidity and mortality worldwide, and is a leading cause of hospitalization in previously healthy individuals. Although introduction of PCV13 contributed to decreases in IPD, still reduced effectiveness of PCV13 against some serotypes such as serotype 3 take attention.

According to our opinion, vaccine-induced changes are a major emerging health problem both in vaccinated and unvaccinated group so that multicenter surveillance is important to view changing seroepidemiology in special circumstances such as war and also culture of the samples might not be enough and additional studies such as PCR could help for surveillance. Also vaccination with very high coverage would be beneficial to decrease carriage of vaccine and non-vaccine serotypes of pneumococcus.

Disclosure of potential conflicts of interest

No potential conflict of interest were disclosed.

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