Vaccine 37 (2019) 3385–3386

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Letter to the Editor

Letter to streptococcus pneumoniae serotype 19A in Latin America and the Caribbean 2010–2015: A systematic review and a time series analysis

Sirs: Agudelo and colleagues reported results of their assessment of changes in invasive pneumococcal disease (IPD) since the introduction of pneumococcal conjugate vaccine (PCV) in the Latin America and Caribbean region [1]. They suggested that, after PCV, there was a reduction of IPD cases; nonetheless, they could not confirm a change in trends of serotype 19A disease.

There are some issues with the results that might bias their conclusions.

First, the study search criteria for the period 2010–2016 neglected information from PCV10 countries, which leads to the following methodological issues:

- In Brazil, although this analysis presents SIREVA data through 2013, it overlooks published SIREVA data available through 2017 that demonstrates that 19A IPD in children < 5 years of age increased from 19 cases (12% of all IPD cases) in 2013, to 40 cases (29%) in 2015 [2].

- In Chile, the overall proportion of serotype 19A IPD was $\leq$ 5% before PCV10 implementation in 2010 but increased to 13% in 2015. In 2014, the highest proportion of 19A, 25%, was found in children younger than 24 months. Additionally, nearly 100% of the serotype 19A strains isolated from meningeal infections in children less than 5 years of age were resistant to penicillin [3].

- In Colombia, Agudelo's paper showed no trend in serotype 19A IPD. However, information from Colombia's national surveillance program reveals that after PCV10 introduction in 2012, 19A IPD has been statistically significantly increasing from <6% in the pre PCV10 period to 34,1% through 2015 in children <5 years old; a similar incremental trend has been noted across all age groups [4].

Furthermore, studies from Brazil, Chile, and Colombia report that a greater proportion of the 19A IPD cases are associated with clonal complex CC320, which is resistant to antibiotics and clinically more virulent [3,5,6].

Second, the authors do not describe the limitations of the SIREVA data, which is a passive surveillance that is not uniform between countries. The SIREVA data numerator does not represent the entire country population, so the authors' use of the estimated national population as the denominator tends to dilute the results. The authors do not provide any methodology for adjustment of the rates cited.

Third, this publication combines NIP surveillance data of countries that use PCV10 with those that use PCV13. The utility of this analysis is questionable because PCV13 includes a serotype 19A as part of vaccine formulation, while PCV10 does not. The WHO Strategic Advisory Group of Experts recently advised that PCV13 may have additional benefits in settings where disease attributable to serotype 19A is significant, and there have been sustained decreases in serotype 19A IPD among vaccinated children in PCV13 countries [6,7].

In summary, the analysis published by Agudelo has several limitations, particularly in the interpretation of changes in 19A IPD case trends after PCV implementation. It is important to reinforce the impact of PCV immunization programs in the Latin America and the Caribbean region against pneumococcal disease, but also to strengthen epidemiological surveillance systems to permit public health officials to make informed decisions based on accurate assessments of impact.

Declaration of interests

This project was funded by Pfizer Inc.
All authors are employees of Pfizer Inc.

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https://doi.org/10.1016/j.vaccine.2019.03.080

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