Impact of PCV13 on Serotype 3 Invasive Pneumococcal Disease and Nasopharyngeal Carriage in Massachusetts’ Children

Rotem Lapidot, Boston Medical Center
Kimberly M. Shea, Boston University
Brent A. Little, Boston Medical Center
Inci Yildirim, Emory University
Stephen T. Pelton, Boston University

Journal Title: Open Forum Infectious Diseases
Volume: Volume 4, Number suppl_1
Publisher: Oxford University Press (OUP) | 2017-10-04, Pages S467-S467
Type of Work: Article | Final Publisher PDF
Publisher DOI: 10.1093/ofid/ofx163.1194
Permanent URL: https://pid.emory.edu/ark:/25593/s6gb1

Final published version: http://dx.doi.org/10.1093/ofid/ofx163.1194

Copyright information:
© The Author 2017. Published by Oxford University Press on behalf of Infectious Diseases Society of America.
This is an Open Access work distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Accessed December 26, 2019 11:23 PM EST
penicillin G (PEN; from 30.3% in 2009 to 16.0% in 2015) and ceftriaxone (CRO; from 27.3% to 12.0%), as did PCV13 STs (from 34.5% to 16.0% and from 27.5% to 8.6%, respectively). ST 19F showed stable S patterns over time and 19A remained the less S ST with high NS rates for PEN (49.0%–76.5%), CRO (24.5%–64.8%), erythromycin (ERY; 76.9%–90.8%), and clindamycin (CLI; 51.0%–73.1%). These NS rates for 19A rose from 2009 to 2011–2012, decreasing in 2013–2016. NS rates for CLI and ERY against ST 3 increased to 19.6% and 23.9% in 2015, respectively. Non-vaccine STs showed stable NS rates for PEN, CRO, and CLI. However, an increasing trend for ERY NS (from 35.2% in 2009 to 45.0% in 2015) was noted, which was driven by increasing NS rates for 35B (from 42.3% in 2009 to 71.2% in 2015).

Conclusion. PCV13 ST exhibited decreasing trends for NS during the study period, except for ST 3, which showed stable S rates over time. Overall, implementation of PCV13 decreased considerably the NS rates in S. pneumoniae causing infections in the US adult population. Further surveillance will enhance understanding of future antimicrobial patterns in S. pneumoniae in the context of adult pneumococcal vaccination programs.

Disclosures. R. E. Mendes, Pfizer, Inc.: Research Contractor, Research grant; H. L. Sings, Pfizer, Inc.: Employee; Salary; I. A. Layla, Pfizer, Inc.: Employee; Salary; L. N. Woosley, Pfizer, Inc.: Research Contractor, Research grant; R. K. Flamm, Pfizer, Inc.: Research Contractor, Research grant; E. E. Isturiz, Pfizer, Inc.: Employee, Salary

1497. Changing Epidemiology of Invasive Pneumococcal Disease due to Conjugate Vaccine Serotypes in Toronto, Canada After Introduction of a Routine Pediatric PCV13 Program

Allison M. George, MD, MSc1; Karen Green, MSc, RN2; Agron Plveneshi, BSc3; Wallis Rudnick, MSc2; Sylvia Peng-Porter, MLT2; Jeff Li, BSc2; Shalini Desai, MD3

Session: 165. Pneumococcal Immunization and Epidemiology-North America

Background. In Ontario a publicly funded PCV7 infant program (3 + 1 schedule), was introduced in 1/2005, PCV10 in 10/2009 and PCV13 in 11/2010 (2 + 1 schedule with catch-up to 35m). TIBDN performs population-based surveillance for invasive pneumococcal disease (IPD) in Toronto/Peel to evaluate program impact.

Methods. IPD cases are reported to a central office and one isolate/case is serotyped. Demographic/clinical data are collected by chart review and patient/physician interview. NS rates were calculated.

Results. Overall 47 cases of ST3 IPD were identified from 2002 to 2016; the incidence of ST3 IPD in children <18 years was observed.

Conclusion. Six years after PCV13 implementation, no significant changes in ST3 IPD incidence, age distribution, clinical syndrome or presence of comorbidities among children in children <18 years of age were observed. An increase in NP carriage in children <7 years of age was observed.