Abstract (eposter session)

Effects of three years of immunisation with higher valent pneumococcal conjugate vaccines in German children
M. van der Linden*, M. Imöhl (Aachen, DE)

Objectives: A general recommendation for vaccination with pneumococcal conjugate vaccine (PCV) was issued for German children up to the age of 2 years in July 2006. In 2009, two higher valent PCVs were licenced in Germany: PCV10 in April 2009, PCV13 in December 2009. Here, we present data on cases of IPD sent in for serotyping in the seven years following the start of PCV-vaccination, focusing on the effect on the new serotypes in PCV10 (1, 5, 7F) and PCV13 (1, 3, 5, 6A, 7F, 19A). Methods: Pneumococcal isolates recovered from children with invasive pneumococcal diseases (IPD) were sent to the National Reference Center for Streptococci. Identification of the isolates was confirmed and serotyping was performed using the Neufeld-Quellung-reaction. Results: In 2011-2012, IPD cases in children <2 years with PCV7 serotypes had decreased by over 90% (n=4), while cases with non-PCV7 serotypes almost doubled. Particularly, the six new serotypes increased after PCV7 introduction but decreased after higher-valent vaccine introduction in 2009. In 2011-2012 only 24 cases (PCV13nonPCV7) were reported, as compared to 47 in 2009-2010, representing a 49% reduction. Reduction was observed for serotypes 1 (78%), 3 (55%), 7F (53%) and 19A (70%). Serotype 5 is very rare in Germany, and serotype 6A has already almost disappeared because of cross-protection from serotype 6B. Interestingly, of the 28 cases in 2011-2012 with PCV13 serotypes, 17 (61%) were not vaccinated. Conclusions: Seven years after the general vaccination recommendation reported cases caused by PCV7 serotypes have almost disappeared. Three years after the introduction of higher valent PCVs strong effects are visible, among children <2 years due to the additional six new serotypes. The reduction of 19A serotype cases was 70%.