

Invasive pneumococcal disease in children: an island's reality.

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BACKGROUND: Invasive Pneumococcal Disease (IPD) in children is the major cause of morbimortality worldwide and the major vaccine preventable infectious disease. The heptavalent pneumococcal conjugated vaccine (PCV7) was licenced in Portugal in 2001 and there is an estimated vaccination rate in Madeira Island of 77,9%.

METHOD: Descriptive observational prospective study, conducted in Hospital Central do Funchal (Madeira Island) between July 2006 and June 2009, in children younger than 15 years old (population of 45.000) with positive culture for *Streptococcus pneumoniae* in normally sterile body fluids.

RESULTS: 26 cases of IPD were analyzed. There was a male preponderance (65,4%) and 53,8% of children attended a daycare center/school. Clinical presentation: pneumonia (n=15), meningitis (n=5), occult bacteremia (n=4) and pneumonia with effusion (n=2). Age range: 1-169m, median 64m, with 34,6% under 24m (n=9). Complications occurred in 26,9% (n=7). Less common serotypes were identified in patients with risk factors (n=8). None of the serotypes included in PCV7 were isolated in the vaccinated subset (n=14), while 2 included in PCV7 were isolated in the non-vaccinated subset (n=12). New serotypes not included in PCV7 were identified (n=24): serotype 1 (n=10) associated with pneumonia (60% of cases) and children >60m (n=8); serotype 19A (n=5) associated with occult bacteremia (50% of cases) and children <24m (n=4). There were no fatalities.

CONCLUSIONS: There was a higher incidence of IPD in children older than 60m presenting as pneumonia (serotype 1) and children younger than 24m presenting as occult bacteremia (serotype 19A). Only 2 serotypes included in PCV7 were isolated (6B, 14), belonging to the non-vaccinated subset. Herd immunity might have been accomplished due to the high rate of vaccination. Continuous clinical and epidemiological surveillance is extremely important.