

SEROTYPE DISTRIBUTION, ANTIBIOTIC RESISTANCE AND COVERAGE OF PNEUMOCOCCAL CONJUGATE VACCINES (PCV) BEFORE THEIR INTRODUCTION IN THE NATIONAL SCHEDULE: ARGENTINA 2000-2011.

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Background: Streptococcus pneumoniae (Spn) is a prevalent cause of invasive diseases in children, justifying continuous surveillance Programs.

Aim: to determine serotype distribution, antibiotic resistance and coverage of PCV of Spn causing invasive disease in < 6y.o. before the incorporation of the PCV in the National Schedule in January 2012.

Methodology: Spn isolated from sterile fluids (55 hospitals, 17 provinces and Buenos Aires) from January 2000 to August 2011 were serotyped by Quellung. MIC was performed by agar dilution (CLSI).

Results: 2402 Spn (63.1% < 2y.o.) were evaluated. Diagnosis: pneumonia(53.7%), meningitis(23.1%), sepsis(9.2%), other(13.9%). Fifty serotypes(%) were identified: 14(26.3), 1(12.7), 5(12.3), 6B(4.9), 19A(4.7), 7F(4.6), 18C(3.9), 6A(3.5), 9V(3.1), 23F(2.9), 19F(2.6), others(15.9). Changes in serotypes were observed: decrease in serotypes 14(35.3%-22.6%) and 6B(7.5%-4.2%) and increase in 1(7.5%-14.7%), 19A(2.6%-5.1%), 6A(2%-4.8%), 3(1.5%-3.4%) and 7F(3.5%-6.1%). Penicillin no susceptibility (PNS: MIC $\geq$ 0.12mg/L) was 33.7% (25.3% MIC=0.12-1mg/L; 8% MIC=2mg/L; 0.4% MIC=4mg/L), remaining stable. Main serotypes associated with PNS were:

14(72.1%), 6B(68.5%), 19A(67.9%), 6A(48.2%), 9V(34.2%), 23F(23.5%), 19F(25%) and 9N(15.4%). No-susceptibility was: cefotaxime 13.6% (meningeal isolates), 1.1% (non-meningeal isolates); amoxicillin 0.6%; meropenem 8.4%; tetracycline 11%; chloramphenicol 0.6%; ofloxacin, rifampicin and vancomycin 0%. Erythromycin resistance was 18.5% increasing from 6.3%(2000) to 28.2%(2011) and trimethoprim-sulfamethoxazole decreased from 54%(2000-03) to 41%(2008-11). Serotype coverage of PCV-10/PCV-13 during 2008-2011 for < 2y.o. was: 68.2%/82.4%(all diagnosis); 72.1%/87%(pneumonia); 70.2%/79.5%(meningitis).

Conclusions: PNS keeps stable in the last years but erythromycin resistance increased. Serotype 14 decreased through the time but remain been the most prevalent. The increased in the last decade of the prevalence of serotypes related to PCV10-13 (1,19A,6A,3 and 7F) deserves the introduction of a PCV with a highest coverage.