

P0349 Assessment of the impact of vaccination with the 13-valent pneumococcal conjugate vaccine in Navarra, Spain

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background: pneumococcal serotype determines disease development, and clinical phenotype. the 13-valent pneumococcal conjugate vaccine (pcv13) was introduced in navarra in 2010. monitoring of serotype distribution is necessary for epidemiological and microbiological surveillance and evaluation of vaccines. we aimed to monitor the circulating serotypes after the introduction of the pcv13 and to study the antimicrobial susceptibility of the pneumococcal isolates.

materials/methods: we included the cases of invasive pneumococcal disease (ipd) diagnosed in navarra between 2010-2018. an ipd case was defined as isolation of *streptococcus pneumoniae* or detection by pcr from a normally sterile body site. pneumococcal isolates were antimicrobial susceptibility tested at the complejo hospitalario de navarra and serotyped at the national center.

results: 549 ipd were included. sixty three (12%) patients were <5 years old, 216 (39%) patients were 5-64 years old and 270 (49%) patients were >=65 years old. fifty ipd could not be serotyped. among the 499 serotyped ipd, the 3 most frequent serotypes were: 3 (17%), 8 (9%) and 19a (8%). other detected serotypes (<5%) were: 7f, 22f, 24f, 14, 9n, 12f and 15a. the detected serotypes according to the group of age were: 19a, 24f and 3 in children < 5 years old; and serotypes 3, 19a and 22f in patients >= 65 years old. serotype 3 was detected in 86 (17%) of pcv13 vaccine failures. the rate of antibiotic resistance and the related serotypes was: 3% of penicillin resistance related to serotypes 11a, 14 and 19a; 2% of cefotaxime resistance related to serotypes 11a, 14 and 19a; 22% of erythromycin resistance related to serotypes 24f, 33f and 19a; and 1.6% of quinolones resistance related to diverse serotypes. after excluding serotype 3, 30% of ipd cases of the 2010-14 period were caused by serotypes included in pcv13 whereas in 2015-18 period it decreased up to 14%.

conclusions: the age distribution in navarra is similar to europe. the majority of ipd in navarra were caused by serotype 3 which is frequently associated to pcv13 failure and is very susceptible. consequently the incidence of resistances is low. in 2015-18 period all pcv13 serotypes have significantly decreased ($p < 0.05$) but serotype 3.

