

## Abstract 660

### STREPTOCOCCUS PNEUMONIAE COLONIZATION IN SPAIN: DIFFERENCES BETWEEN CHILDREN WITH ACUTE OTITIS MEDIA AND HEALTHY CONTROLS. THE NATIONWIDE NECOPED STUDY

Type: AS: Regular Abstracts

Topic: AS04. Public health and epidemiology (only non-SARS-CoV2 content) / AS04a. Population studies and surveillance

Authors: Fernando Baquero-Artigao, Teresa del Rosal, Josefa Ares, César García-Vera, María Rosa Albañil, Ana Lorente, Isabel Mellado-Sola, Paula Rodríguez-Molino, Cristina Calvo, Ana Gallego, Guadalupe del Castillo, Laura Somalo, Rosario Guerrero, Alicia Bonet, Alberto Bercedo, Patricia Álvarez, Marta Carballal, Elena Sánchez Almeida, Juan García Sánchez, Santiago Alfayate, Ramona Mínguez, Raúl Peiró, Montserrat de Alaiz, Sonia Alonso, Milagros Martínez, María José Galán, María José Edo, María Teresa Martínez, María Isabel Gómez Martín, María José Martín Sierra, María José Arconada, Victoria Lanzadera, Esther Bernal, Beatriz Sánchez de la Vara, María Escorial, Daniel Gros, Mercedes Lozano, Silvia Prado, Gloria Landín, Catarina Fervenza, Zerezade Coello, Nayra Carmona, Esther Diaz, Sofía Hernández, Esther Ruiz, María Liberata García, Jessica Martin, Pablo Fernández, Ramona Fernández, Miguel García Boyano, Marina Rico, Jesús Rodríguez, Rosa Sánchez, Enriqueta Rico, Carmen Torres, José Yuste; Spain

## Background

*Streptococcus pneumoniae* is one of the most frequent bacteria in community-acquired infections. The aim of this study was to compare *S. pneumoniae* nasopharyngeal carriage rate, most prevalent serotypes and antimicrobial resistance patterns between children with acute otitis media (AOM) and healthy controls (HC) in a country with routine PCV13 vaccination.

## Method

Observational, transversal, prospective and multicenter study coordinated by the Primary Care Pediatric Research Network (PAPenRED). Children with AOM and HC aged 6 months to 5 years were recruited at Primary Care centres in April 2022–June 2023. Pneumococcal isolates were analyzed at the National Center of Microbiology.

## Results

The study included 482 children with AOM and 849 HC. Pneumococcal carriage rate was 51.4 and 31.7% respectively ( $p < 0.0001$ ). Serotype identification was available for 185 samples from the AOM group and 175 HC. PCV13 serotypes represented 15.1% in children with AOM and 9.1% in HC ( $p = 0.1155$ ). The most frequent serotypes in the AOM group were 11A (10.8%), and 15B (10.3%). Among HC, the most prevalent ones were 15B (20%) and 23B (8%), whereas serotype 11A represented 5.7%. PCV15/20 serotypes represented 17.3%/51.8% in children with AOM and 14.9%/45.7% in HC ( $p = 0.6269/0.2862$ ). There were no significant differences in antibiotic resistance between AOM and HC: 60/185 (32.4%) vs. 46/175 (26.3%) for penicillin ( $p = 0.2477$ ); 39/185 (21.1%) vs. 51/175 (29.1%) for erythromycin ( $p = 0.1002$ ); and 21/185 (11.4%) vs. 12/175 (6.9%) for amoxicillin ( $p = 0.1956$ ). Serotype 11A associated high rates of antibiotic resistance (90% to penicillin and 67% to amoxicillin).

## Conclusions/Learning Points

Pneumococcal colonization is more prevalent among children with AOM than HC, and is mainly caused by non-PCV13 serotypes. Resistance patterns are similar in children with AOM and HC. Serotype 11A is associated with high resistance to amoxicillin.

Print