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**Macrolide-resistant *Streptococcus pneumoniae* (SPN) in Argentina (ARG):
prevalence of *ermB* and *mefA* genes**

Corso A¹, Faccone D¹, Galiá C¹, Gagetti P¹, Rodríguez M¹, Regueira M², Pace J^{1,2}, Lopardo H³,
Galas M¹ and “*S. pneumoniae* Working Group”

¹Servicio Antimicrobianos, ²Servicio Bacteriología Clínica, INEI-ANLIS “Dr. Carlos G. Malbrán”,
Av. Velez Sarsfield 563, ³Htal. Pediatría “J P Garrahan” Combate de los Pozos 1881,
Buenos Aires, Argentina.

Background: From 1993 ARG has been participating in a national epidemiological surveillance conducted by PAHO, in order to determine the prevalence of capsular types and antimicrobial resistance patterns of SPN causing invasive infections in children ≤ 6 y-o. A total of 1499 SPN from 45 hospitals and 16 cities were collected from February 1993 to December 2001. This is the first national study describing the mechanisms of macrolides resistance in SPN from ARG.

Objectives: To determine the incidence of *ermB* and *mefA* genes among invasive ERY-R SPN

Methodology: Serotypes were determined by Quellung, MICs according NCCLS guidelines, *ermB* and *mefA* genes by PCR, and clonal relationship by *Sma*I-PFGE and MLST.

Results: Fifty-two (3,5%) SPN were erythromycin-resistant (ERY-R) and resistance increased from 0% in 1993-4 to 1.4% in 1995-7 and 6% in 1998-2001. Fifty ERY-R SPN (from 14 hospitals, 8 cities), were available for this study. Serotypes in ERY-R SPN were 14 (44%), 6B (34%), 9V (8%), 19F (4%), 23F (4%), 23A (2%), 19A (2%) and 11A (2%). Twenty nine (58%) SPN carried the *mefA* gene [ERY MIC range in $\mu\text{g/ml}$] [4-32], 17 (34%) carried *ermB* gene [16->512], 3 (6%) *ermB* + *mefA* genes [16-512] and 1 (2%) was negative for both genes [16]. The *mefA* gene was predominant in SPN serotype 14 (100%) and 9V (75%), whilst *ermB* was common in SPN serotype 6B (82%). A total of 9 clonal types were identified, 88% of the isolates were related to 5 international clones: England¹⁴-9 (42%), Poland^{6B}-20 (20%), Spain^{9V}-3 (16%), Spain^{6B}-2 (6%) and Spain^{23F}-1 (4%).

Conclusions: *mefA* gene (64%) was more frequently detected among ERY-R SPN clinical isolates than *ermB* gene (40%). The prevalence of ERY-R SPN is still low, but the continuous national surveillance is important to know the efficacy of macrolides in our country.