

EVOLUTION OF ANTIMICROBIAL SUSCEPTIBILITY PATTERNS OF CLINICAL GROUP B STREPTOCOCCUS ISOLATED IN BELGIUM

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Background: Increase of erythromycin (E) and clindamycin (C) resistance (R) has been observed among isolates of group B streptococci (GBS). In Belgium, through the 1990s, E-R increased from 3 to 10%. To recommend empiric therapy and intrapartum chemoprophylaxis to prevent early neonatal GBS disease, accurate susceptibility surveillance data are needed.

Objective: To analyze susceptibility profiles to penicillin, E and C and R-phenotype patterns of clinical isolates of GBS.

Methods: Through 2001 to December 2007, 3 subsets (187, 178, 116 significant strains) of GBS isolated in laboratories belonging to the Belgian surveillance network, were tested. Strains were recovered from neonates' blood, cerebrospinal fluid or any deep site and from adults and pregnant women with severe infections. Penicillin, E and C MICs were determined by using Etest® (CLSI interpretive criteria). Furthermore, the inducible (iMLS), constitutive (cMLS) and M phenotype of macrolide-lincosamide R were assessed by a double-disk diffusion test.

Results: All strains were susceptible (S) to penicillin, 24.7% of isolates were R to E, with a higher rate of R among serotype V (46.3%, $p < 0,01$) and 15 % were R to C.

Among the 119 E-R isolates, 79.8% exhibited the MLS_B phenotype (R to E and C), 53 were cMLS with E MIC₅₀ >256 mg/L and 42 iMLS with E MIC₅₀/MIC₉₀ 4/>256 mg/L. The M phenotype (R to E and S to C) was expressed by 24 (20.2%) isolates with E MIC₅₀/MIC₉₀ 4/12 mg/L.

Conclusions: 1) Penicillin remains active against all isolates. 2) Prevalence of macrolides R has increased since the 1990s and is particularly high among serotype V isolates. 3) E-R mechanisms are mainly MLS phenotypes (target-site modification); M phenotype (efflux R mechanism) is also prevalent.