

Prevention of Perinatal Group B Streptococcal Diseases and Early-Onset Neonatal Sepsis or Meningitis in Belgium .

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Background

In the late 1990s, the era of “group B streptococcal (GBS) prevention” was set up. Progressively, prevention strategy has been implemented in the different hospitals. Important steps marked this period as national surveys related to GBS prevention, Belgian consensus meeting and launch of Belgian guidelines for prevention of GBS early onset diseases (EOD; ≤ 5 days). One unintended consequence of GBS prevention efforts may be an increase in the rate of sepsis/meningitis due to Gram negative bacteria (GNB).

Methods

Year based analysis of records from 2 databases: a) cases of neonatal bacteremia / meningitis notified by sentinel laboratories to the Belgian Surveillance Network (BSNet), data for EOD collected since 1991 and b) cases of GBS EOD and late onset diseases (LOD) reported voluntarily by some laboratories to the Belgian reference laboratory for GBS (BRLab).

Results

BSNet: an annual mean of 51 cases of EOD (24-104) were notified by 27 (16-35) laboratories. Overall GBS remained the leading cause and represented annually 34.8% (21,1-54,7%) of EOD but with a significant decrease ($p < 0.01$). It was followed by *E.coli* 12.5%, coagulase negative staphylococci (CNS) 16.4%, *S.aureus* 9.0%, *Listeria* sp 3.0%, *S.pneumoniae* 2.7%, *H.influenzae* 2.1% *S.pyogenes* 1.9%, and others. No significant trend was shown in the rates of *E.coli* and other GNB EOD. For CNS, we did not have data to differentiate definite infections from contaminations.

BRLab: From 1999 to 2005, for an annual mean of 29 cases (23-50), the ratio “LOD/EOD” increased from 0.16 to 0.71. The number of LOD remained stable but the number of EOD decreased ($p < 0.01$).

Conclusions: 1) Since 1991, GBS has remained the leading cause of neonatal EOD 2) But as expected with the implementation of a GBS prevention strategy, a significant decrease of GBS EOD has occurred 3) No significant trend of the annual rates of *E.coli* and other GNB infections was shown.