

Laczeski, Margarita

E-mail: melaczeski@fceqyn.unam.edu.ar

INTRODUCTION

Streptococcus agalactiae (GBS) is the leading cause of severe invasive infections in infants less than three months. Meningitis, pneumonia and sepsis are the leading cadres in these children. Infection is primarily acquired vertically from mothers colonized with GBS. GBS has many virulence factors, the capsular polysaccharide is one of the most important and are associated with different surface proteins of antigenic characteristics, such as α , β , Rib, HylB, Lmb, C5a peptidase, FbsA, FbsB and CylB which are encoded by several genes associated with virulence and host interaction acting on bacteria involved in invasiveness. The study of surface protein antigens is important for the understanding of the pathogenesis and epidemiology of infection and several these antigens have been proposed as components of multivalent conjugate vaccines.

OBJETIVES

This study was carried out in order to study the molecular profiles of virulence in GBS strains.

MATERIAL & METHODS

Two hundred isolates of vaginal swabs from pregnant women from Misiones (Argentina), were studied. Virulence genes those encoding: C protein (*bac* and *bca*), Rib protein (*rib*), laminin (*lmb*), hyaluronidase (*hylB*), c5a-peptidase (*scpB*), FbsA and FbsB protein (*fbsA* and *fbsB*) and β -hemolysin (*cylB*), were investigated by conventional PCR.

RESULTS

Virulence genes were simultaneously identified in 73 isolates (36.5%). *fbsA*, *fbsB* and *cspB* genes were detected in 100% of the strains. Other genes studied were detected in these frequencies: *cylB* (95%), *lmb* (94%), *bca* (87,5%), *rib* (85,3%), *hylB* (81%) and *bac* (58%). The results are shown in Figures 1 to 3

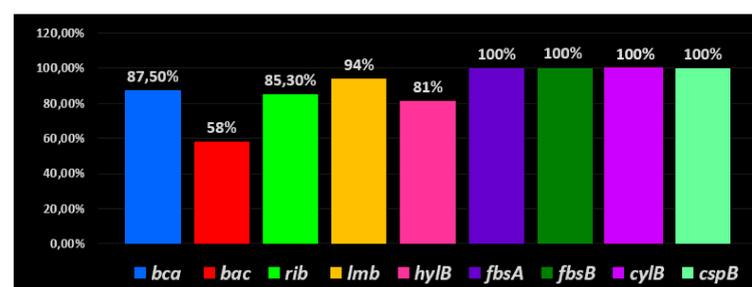


FIGURE 1. Frequency of virulence genes in 200 strains of *Streptococcus agalactiae* isolated in Misiones, Argentina between 2004-2015.



FIGURE 2. Electrophoresis in agarose gel 2% of PCR products for *cspB* gene. First lane, molecular weight marker, K562 DNA Molecular Weight [10 ng/ul] Promega Madison, Wi USA— lane 2 to 16, *Streptococcus agalactiae* strains: —last lane, negative control.

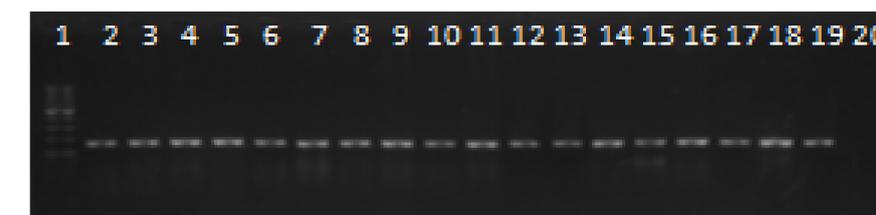


FIGURE 3. Electrophoresis in agarose gel 2% of PCR products for *cylB* gene. First lane, molecular weight marker, K562 DNA Molecular Weight [10 ng/ul] Promega Madison, Wi USA— lane 2 to 19, *Streptococcus agalactiae* strains: —last lane, negative control.

CONCLUSION

The high frequency of detection of *fbsA*, *fbsB* and *cspB* genes, suggesting assessment of their inclusion in future vaccines.

ACKNOWLEDGEMENTS

Especially to Mgter. Marta Vergara and members of the department of bacteriology at the National University of Misiones.