TITLE: Genotyping of capsular antigens of *Streptococcus agalactiae* obtained from pregnant and non-pregnant women

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ABSTRACT:

Streptococcus agalactiae, or Group B Streptococcus (GBS)*,* is a microorganism commonly found in the gut, vaginal and/or urinary tract microbiota in 10-30% of the population of healthy women; however, it is also potentially pathogenic, and it is the main cause of newborn sepsis. Transmission to the fetus occurs mainly during labor. Currently, Brazil uses international data to established public strategies of prevention and treatment related to the high incidence of infection by GBS in newborns, as described in 'Prenatal and Puerperium Technical Manual – Qualified and Humanized Attention' from the Health Ministry. The objectives of this study are analyzing the prevalence of capsular serotyping in GBS strains and their antibiotic susceptible. The strains were isolated from the cities of Rio de Janeiro (RJ) (120 strains), São José dos Campos (SP) (120 strains) and São Paulo (SP) (160 strains) from pregnant and non-pregnant women. The samples were classified according to the serotype, using genotyping capsular antigen, and the resistance profile of selected strains was analyzed by disk diffusion, according to CLSI instructions. The initial results from capsular serotypes characterized in 80 strains isolated from pregnant woman in São Paulo, showed that all the strains belong to the serotypes Ia, Ib, II and III, with a high prevalence of serotype Ia (40%) and II (31%). All EGB samples (100%) were sensitive to ceftriaxone, chloramphenicol, penicillin, and vancomycin. Only 6.24% were resistant to clindamycin and erythromycin. The results show that women involved in the study are carriers of serotypes with higher morbidity and mortality, as described in the literature. However, *Streptococcus agalactiae* has sensitivity to most antibiotics tested, suggesting that it is easily treated. This study characterized the GBS profile in pregnant women, contributing to the understanding of host-parasite relationship involving this pathogen. We are now conducting more experiments with strains from non-pregnant women in order to compare the results. At the end of this study, we hope to have important data regarding GBS, useful to propose a new approach to public policies to this specific microorganism

Keywords: *Streptococcus agalactiae, pregnancy, microbiota, sepsis, newborn*

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