TITLE: IDENTIFICATION OF THE CAPSULAR TYPE OF *Streptococcus agalactiae* IN ISOLATES OF COLONIZATION AND INVASIVE AND NON-INVASIVE DISEASE

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ABSTRACT:

Streptococcus agalactiae (GBS) is a commensal that colonizes gastrointestinal and genitourinary tracts of 15-30% of healthy women, and is considered the leading cause of neonatal sepsis and meningitis. EGB can also cause diseases such as meningitis, abscesses and urinary tract infection in elderly and immunocompromised individuals. One of the most relevant factors in the virulence of GBS is the presence of the capsular polysaccharide, which has ten variant capsular antigens: Ia, Ib, II to IX. Knowledge about the circulation of capsular types in the country is important because it contributes to strategies for controlling and preventing diseases in the population at risk. The purpose of this study is to identify and compare the capsular serotypes of GBS isolates in samples of colonization, invasive and noninvasive disease. Serotyping was performed by multiplex PCR. In the period from 11/2012 to 10/2013, 400 pregnant women were evaluated, where 25.5% (102/400) were colonized by GBS. Among the pregnant women, the most frequent serotypes were Ia (42.4%; 39/92), II (20.6%; 19/92), III (16.3%, 15/92) and Ib (9.8; 9/92); the less frequent serotypes were V, IX and VII. In the period from 1999 to 2015, 26 cases of GBS meningitis were identified; serotypes Ia and III were the most frequent, accounting for 84.6% (22/26) of cases, followed by serotypes Ib and IV with 15.4% (4/26). From June 2016 to July 2018, 130 EGB of urinary tract infection were isolated, and serotypes Ia (32.4%; 11/34) and Ib (32.4%; 11/34) were the most frequent, followed by II (23.5%; 8/34) and III (11.7%; 4/34). Serotype Ia was the most frequent both in colonization and in cases of invasive and noninvasive disease, corroborating with the results of other researchers conducted in the country. Serotypes Ia, Ib and III were isolated both in colonization episodes and in pathologies. Knowledge about the distribution of serotypes in the various regions of the country helps to develop vaccines to reduce the mobility of the population at risk, as well as the reduction with hospitalization and therapy costs.

Keywords: *Streptococcus agalactiae*, serotypes, colonization, invasive and non-invasive diseases

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