

عنوان مقاله:

Genotyping of Clinical Streptococcus agalactiae Strains Based on Molecular Serotype of Capsular (cps) Gene Cluster Sequences Using PCR Assay in Hamadan during 2013-2014

محل انتشار:

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خلاصه مقاله:

Background: Group B streptococcus (GBS) is the major cause of serious life threatening infections in neonates, pregnant women, and other adults with underlying diseases. Capsular polysaccharide typing is a significant way for epidemiological studies of GBS, the pathogenesis, and other studies associated with GBS infections including surveillance programs and vaccine development in future. Molecular serotyping (MS) methods offer more accurate and reliable typing of bacteria. The aim of current study was to differentiate genotypes of clinical GBS isolates based on PCR assay to acquire information about the distribution of GBS types in Hamadan, Iran. Materials and Methods: A total of 62 clinical GBS strains including vaginal swabs, urine cultures, and blood culture isolates were examined for genotyping using multiplex PCR assay. Results: Among the 62 GBS isolates examined, all capsular types, except VI, VII, and VIII, were found. Type III was the predominant type with 35 isolates (56.5%), followed by Type V with 11 isolates (17.7%), Type II with 7 isolates (11.3%), Type Ia with 5 isolates (8.1%), and Types Ib and IV with similar prevalence of 2 isolates (3.2%) for each type. Conclusion: The results of the current study demonstrated that Type III is the predominant type in Hamadan, followed by Types V, II, Ia, Ib, and IV, respectively. Using MS method leads to accurate, sensitive, specific, and fast typing of GBS isolates. The advantages of MS method allow it to analyze various populations and to examine invasive and colonizing isolates in extensive epidemiological studies and surveillance activities. In fact, MS will facilitate the proper formulation of candidate GBS vaccines

کلمات کلیدی:

Streptococcus agalactiae, Multiplex PCR, Genotyping techniques, Molecular epidemiology, Vaccines

