

عنوان مقاله:

Serotyping and Molecular Detection of Virulence Genes in *Listeria monocytogenes* Isolated from Pregnant Women with Abortion

محل انتشار:

سیزدهمین کنگره بین المللی میکروب شناسی بالینی استاد البرزی (سال: 1398)

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خلاصه مقاله:

Background and Objectives: *Listeria monocytogenes* is a foodborne pathogen that causes listeriosis, a life-threatening disease in fetuses, newborns, elderly and immunocompromised people. It has been reported that pregnant women account for 20-30% of listeriosis cases and listeriosis in pregnant women can lead to bacteremia, amnionitis and infection of the fetus, resulting in premature delivery, miscarriage, stillbirth and other serious health problems for neonates. Listeriosis has a mortality rate of about 20%. *L. monocytogenes* infection is mediated by many virulence factors. The quick and reliable diagnosis of listeriosis has been recommended to be preferably based on the recognition of virulence determinants of *L. monocytogenes* via molecular techniques. The objectives of the present study included the detection and characterization of *L. monocytogenes* using cultural and biochemical tests, antimicrobial susceptibility, serotyping and survey of its *hlyA*, *inlA*, *inlC*, *inlJ*, *actA* and *prfA* virulence genes in isolates obtained from pregnant women using conventional and molecular methods. **Materials and Methods:** During September 2015 to February 2017, a total of 400 clinical samples (vaginal swabs) were collected from the pregnant women with vaginitis at a tertiary care hospital in Tehran, and tested for the presence of *L. monocytogenes*. The presumptive isolates were characterized biochemically. All *L. monocytogenes* isolates were further analyzed by serotyping and antimicrobial susceptibility tests. All the positive samples for *L. monocytogenes* were analyzed for presence of virulence genes (*hlyA*, *actA*, *inlA*, *inlC*, *inlJ* and *prfA*). **Results:** Twenty-two (5.5%) of the samples found positive for the presence of *L. monocytogenes*. Percentage of isolates resistant to antibiotics in this study was as following: penicillin G 45.45%, gentamicin 36.36%, ampicillin 45.45%, trimethoprim 81.82%, tetracycline 45.45%, ciprofloxacin 18.18%, sulfamethoxazole 81.82%, erythromycin 45.45%, streptomycin 45.45%, and chloramphenicol 54.55%. The majority of tested isolates (59.10%) belonged to serotype 4b, followed by 1/2a (22.73%), 1/2b (13.63%), and 3c (4.54%). The *hlyA*, *actA*, and *inlA* were detected in all of the 22 *L. monocytogenes* isolates but, two, three and five isolates were found to lack *inlC*, *inlJ* and *prfA*, respectively. Only one isolate lacked three *inlC*, *inlJ* and *prfA* genes, also two isolates simultaneously lacked both *inlJ* and *prfA* genes. **Conclusion:** In conclusion, evaluation of the virulence ... factors and antimicrobial susceptibility can be highly helpful to the development of effective

کلمات کلیدی:

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