عنوان مقاله:

A Case of Identity Confirmation of Brucella abortus S۹۹ by Phage Typing and PCR Methods

محل انتشار:

مجله آرشیو رازی, دوره 74, شماره 2 (سال: 1398)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

Brucellosis is a zoonotic infection that is associated with fever in humans and abortion in animals. The agent of this disease is a facultative intracellular gram-negative coccobacillus called Brucella. There are six classic species, including B. abortus, B. melitensis, B. suis, B. canis, B. neotomae, and B. ovis. In recent years, four new species have been reported, including Brucella ceti, B. microti, B. pinnipedialis, and B. inopinata. Human disease causes hygienic and economic losses, including inactivity of workforces in the community and high cost of treatment. The disease also causes catastrophic losses in the livestock industry. There is no effective vaccine against human brucellosis. Hence, attempts to prevent human infection with Brucella are focused on preventative measures, including control of infection in livestock, which lead to a reduction in its incidence in humans. The common methods for diagnosis of this disease are serologic methods including Rose Bengal, Wright -۲ ME and the ring test. B. abortus strain S۹۹ is used to produce these diagnostic antigens. The production of these antigens requires the presence of a well-characterized seed with full identity. The aim of this work was confirmation of the identity of B. abortus S۹۹ by phage typing, AMOS and multiplex PCR techniques. Therefore, it is essential to carry out the identification of the strains used as seed for the production of the brucellosis diagnostic antigens. In this project, B. abortus strain ۹۹ was supplied by the bacterial collection of the Brucellosis Department of Razi Vaccine and Serum Research Institute. Then, the main aim of the present study was the confirmation of the seed identity by doing the tests through the standard phage typing method, AMOS PCR and multiplex PCR (Brucladder) methods. Results were in support of the identity of the studied strain, and the molecular methods could also be used as the sensitive approaches for validation of antigenic seed.

کلمات کلیدی: