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Acta Medica Iranica
2009;47(4) : 22-27

Isolation of Brucella abortus Using PCR-RFLP Analysis

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Abstract:

Brucella transmission and epidemiology depend on infecting species and biovar. Therefore, exact identification of the Brucella is important to design correct control and treatment strategies. In this study, we examined presence of other Brucellae in Isfahan. One hundred twenty Brucella isolates were collected and genomic DNA was extracted from them. omp2a fragment of all isolates were amplified using a pair of specific primers and the PCR products were electrophoresed and stained with EtBr. These PCR products were then restricted using PstI restriction endonuclease. The PCR products of all isolates had the same size of 1100bp. The banding pattern of PCR-RFLP for all of the isolates were similar to banding pattern of the Brucella melitensis biotype 1 except for 5 samples that demonstrated banding pattern similar to B. abortus. Based on our results, it is clear that biotype 1 of the B. melitensis is not the only Brucella present in Isfahan and now B. abortus is also present in our area. These results are very important in planning for the control of the disease as well epidemiology and even treatment of the patients.

Keywords:

Omp2a

TUMS ID: 2898

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