

Title: Determination of sensitivity and specificity of PCR in diagnosis of human brucellosis

Abstract

Background and Objective: Brucellosis is one of the most common zoonotic diseases in Iran and human brucellosis is endemic in all parts of the country. Diagnosis of brucellosis is frequently difficult to establish. This is not only because the disease clinically mimic any infectious and non infectious diseases, but also because the established diagnostic methods are not always successful in isolating the organisms. The aim of this study was to determine the sensitivity and specificity of PCR method for diagnosis of human brucellosis.

Material and Methods: 30 serum samples from patients with clinical presentation of brucellosis that had positive wright test and 30 serum samples of healthy people with negative wright test were included in this study. These samples were examined by PCR with F₄/R₂ primer.

Results: In patients, how were positive wright test , 15 samples were positive by PCR. While In healthy persons, 5 samples were positive by PCR. The sensitivity and specificity of PCR was 66.67%, 88.23% respectively.

Conclusion: we found that PCR had not high sensitivity and specificity in diagnosis of brucellosis. For this reason, we suggested the use of combination methods for diagnosis of human brucellosis.

Key Words: Brucellosis, PCR, specificity, sensitivity