

Evaluation OF TUBEX TF (IDL), Typhi Rapid (mBDR), Typhidot (mBDR) and Widal (Fortress) Reagent for Detection of Salmonella Typhi Infection, in Comparison with Blood Culture

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Background: Isolation of Salmonella typhi from blood is the definitive diagnosis of typhoid fever, but this method has its own limitations, where the result needs a few days and the sensitivity is affected by a lot of factors. Likewise, Widal test which is largely used for diagnostic of typhoid, is lack of specificity. Therefore, other rapid and simple serological tests have been developed for the better diagnosis of typhoid fever.

Objectives: To evaluate the performance of TUBEX TF (IDL), TYPHI Rapid (mBDR), TYPHIDOT (mBDR) and Widal (Fortress) reagent, in agreement with blood culture.

Methods: Evaluation was performed on 17 serum samples, from patients who had undergone the blood culture test (automated with BacT Alert or Gal; Culture). Eight from 17 samples were positive for Salmonella typhi culture and 9 were negative. Serological tests using TUBEX TF (IDL), TYPHI Rapid (mBDR), TYPHIDOT (mBDR) and Widal (Fortress) reagent were conducted on all of samples. Agreement of the serological tests with blood culture was calculated.

Results: The agreements between TUBEX TF (IDL), TYPHI Rapid (mBDR), TYPHIDOT (mBDR) and Widal (Fortress) with blood culture were respectively 94.12 %; 52.9%: 70.6 %; 64.71 %.

Conclusion: TUBEX TF (IDL) reagent has better agreement with blood culture, than TYPHI Rapid (mBDR), TYPHIDOT (mBDR) and Widal (Fortress).

Suggestions: Further investigation using larger amount of samples and completed with clinical data supporting typhoid fever diagnosis will be useful in defining the sensitivity and specificity of each reagents.

Key Words : typhoid fever, serological tests, blood culture, agreement.