Abstract: Background: Brucellosis is still a common zoonosis sever public health problem in many parts of world. A large number of Brucella melitensis cases are reported annually in the Mediterranean littoral, Middle East and parts of Latin America. A modified NBT test is described which is suitable for routine diagnosis in hematology and bacteriology laboratory. Of course there are another tests, such as CRP, CCP, ESR, precalcitonine, for differential diagnosis of viral and bacterial infections, we have compared and evaluated their accuracy in this study.

Objectives: The purpose of this study was determined and quantifies neutrophil function in 75 patients with active brucellosis and compare with different clinical and serological variables.

Method and Materials: We conducted case –control, randomized comparing Nitroblue tetrazolium reduction in response to acute brucellosis. We compared the accuracy of routine serologic (2-ME) test and NBT tests in acute brucellosis. In this study we must prepare heparinized blood sample, without freezing, and must doing ST and SP –NBT tests simultaneously as fresh as possible.

Results: Nitroblue tetrazolium reduction in response to acute brucellosis significantly increased in the patients with respect to control group (p=0.022). In more than of half of cases SP –NBT rates were informative than 2-ME for diagnosis of acute brucellosis. It must be recommended that antibiotic therapy could be important in outcome of results.

Conclusion: Nitroblue tetrazolium is more effective test to survey of severity of active brucellosis. These results suggest that the NBT test is of value in the diagnosis of infectious disease such as brucellosis.

Key words: Active brucellosis- Nitroblue tetrazolium – Neutrophil function

Presentation: Poster