Aim: To assess the antimicrobial susceptibility of Brucella melitensis strains in our region. Brucellosis is a common disease in Turkey. Moreover, difficulties are encountered in the treatment process, such as long-lasting therapy, relapses, and side effects of drugs. Hence, novel treatment approaches and the susceptibility of current antibiotics are vital.

Materials and methods: Thirty-four Brucella spp. isolated from blood samples of patients with brucellosis were included.

Minimal inhibitory concentrations for tetracycline, rifampicin, streptomycin, ciprofloxacin, doxycycline, ceftriaxone, and levofloxacin were detected by broth microdilution.

Results: Tetracycline had the lowest and streptomycin the highest MIC \(^{50}\) and MIC \(^{90}\) values, respectively. A total of 5 strains were intermediate-susceptible and 1 strain was resistant to rifampicin.

Conclusion: Doxycycline and tetracycline seem to be quite effective antibiotics against Brucella melitensis strains. Although streptomycin and rifampicin have high MIC levels against Brucella melitensis strains in our region, inconsistencies between in vitro susceptibility and in vivo activity should be considered.

Key words: Brucella, MIC, susceptibility