Multidrug-resistant Acinetobacter baumannii (MDR-AB) is emerging as a major
nosocomial pathogen worldwide. In recent years, the inadequacy of antimicrobial
agents available to treat infections particularly in Intensive Care Units (ICUs) due to
MDR-AB, has constrained clinicians and forced them to use combination therapies. In
this study, in vitro synergistic activities of imipenem and meropenem in combination
with cefoperazone-sulbactam, ampicillin-sulbactam, polymyxin B and rifampin were
tested against 34 clinical isolates of (MDR-AB), all collected from the Intensive Care
Units of Süleyman Demirel University Hospital. Minimum inhibitory concentration
values of all antibiotics were determined by the broth microdilution method and
antibiotic interactions were analyzed by checkerboard assay. The combination of
meropenem with ampicillin-sulbactam showed synergy against 94.1\% of MDR-AB
while the synergy rates for combinations of imipenem and ampicillin-sulbactam,
imipenem and rifampin, imipenem and cefoperazone-sulbactam, imipenem and
polymyxin B, meropenem and rifampin, meropenem and cefoperazone-sulbactam and
meropenem and polymyxin B were 88.2, 73.5, 70.6, 38.2, 17.6, 8.8 and 2.9\%,
respectively. Antagonism was not observed in any of the combinations. We must
emphasize the fact that evaluating the efficacy of combinations against MDR-AB by
synergy tests is essential to guide the treatment. Key words: Acinetobacter baumannii,
antimicrobial combination, carbapenems, checkerboard assay, multidrug-resistant.