

## Typification and Determination of Antibiotic Susceptibility Profiles with E Test Methods of Anaerobic Gram Negative Bacilli Isolated from Various Clinical Specimen

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**Abstract :** Objective: This study was carried out with the purpose of defining by using the E test method and determining the antibiotic resistance profiles of Gram-negative anaerobic bacilli isolated from various clinical specimens obtained from patients with suspected anaerobic infections and referred to Medical Microbiology Laboratory of Afyon Kocatepe University, ANS Application and Research Hospital. Methods: Two hundred and seventy eight clinical specimens were examined for isolation of the anaerobic bacteria in Medical Microbiology Laboratory between the 1st November 2014 and 30th October 2015. Specimens were cultivated by using Scheadler agar that 5% defibrinated sheep blood added, and Scheadler broth. The isolated anaerobic Gram-negative bacilli were identified conventional methods and Vitek 2 (ANC ID Card, bioMerieux, France) cards. Antibiotic resistance rates against to penicillin G, clindamycin, cefoxitin, metronidazole, moxifloxacin, imipenem, meropenem, ertapenem and doripenem were determined with E-test method for each isolate. Results: Of the isolated twenty-eight anaerobic gram negative bacilli fourteen were identified as the *B. fragilis* group, 9 were Prevotella group, and 5 were Fusobacterium group. The highest resistance rate was found against penicillin (78.5%) and resistance rates against clindamycin and cefoxitin were found as 17.8% and 21.4%, respectively. Against to the; metronidazole, moxifloxacin, imipenem, meropenem, ertapenem and doripenem, no resistance was found. Conclusion: Since high rate resistance has been detected against to penicillin in the study penicillin should not be preferred in empirical treatment. Cefoxitin can be preferred in empirical treatment; however, carrying out the antibiotic sensitivity testing will be more proper and beneficial. No resistance was observed against carbapenem group antibiotics and metronidazole; so that reason, these antibiotics should be reserved for treatment of infectious caused by resistant strains in the future.

**Keywords :** anaerobic gram-negative bacilli, anaerobe, antibiotics and resistance profiles, e-test method

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