SUMMARY

The in vitro susceptibility of 274 clinical isolates including 9 different genera of anaerobic bacteria to twelve antibiotics was determined by the microbroth dilution technique. Penicillin G was active against most of the strains except Bacteroides species at ≤ 0.2-6.2 μg/ml. Carbenicillin was the most active against all strains at ≤ 6.2-50 μg/ml. Ampicillin was the least effective penicillins against all species tested. Cefoxitin showed somewhat greater activity than cephalothin against B. fragilis group. Chloramphenicol was active against anaerobic cocci and gram positive, non-sporeforming bacilli. Clindamycin was active against most of the anaerobes at 3.1-6.2 μg/ml. Lincomycin and erythromycin were less active than clindamycin. Most of the groups of bacteria tested demonstrated high resistance to doxycycline and tetracycline. The total of 274 strains were tested for β-lactamase production by using the modification of the Nitrocefin assay. 74% of B. fragilis group, 46% of B. melaninogenicus group and 20% of other Bacteroides species produced β-lactamase. Some strains of Propionibacterium acnes and gram-positive anaerobic cocci also showed the β-lactamase production. The incidence of resistance of anaerobic bacteria to twelve antibiotics is greater than previous reports and indicate the need for reliable susceptibility testing of anaerobic bacteria in Thailand.
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