Antibiotics Resistance Among S. flexneri Strains Isolated from Children in Tehran, Iran

Background and Aims: Shigellosis is one of the major causes of morbidity in children with diarrhea in Iran. The aim of this study was to investigate antimicrobial resistance of S. flexneri strains isolated from clinically diagnosed cases of gastroenteritis and acute diarrhea in Tehran, Iran.

Methods: Shigella strains were isolated from stool samples of children patients who visited the several major hospitals in Tehran. S. flexneri was preliminarily identified by biochemical tests as well as by API20E. Antimicrobial resistance testing was performed according to the standard guidelines of the Clinical and Laboratory Standards Institute.

Results: All strains were resistant to streptomycin. More than 97% of the strains were resistant to tetracycline, 89% to co-trimoxazole, 80% to amoxicillin, 33.5% to ampicillin, 14% to chloramphenicol, 8% to kanamycin, 5% to nalidixic acid, 1.5% to cefixime and 0.5% to amikacin and furazolidone. None of the tested isolate was resistant to ceftriaxone, cefotaxime, cefazidime, gentamicin, ciprofloxacin, cephalothin, cefotaxime, cephalaxine and nitrofurantoin.

Conclusions: This study indicates the increase in incidence of multiple drug resistance among the strains of S. flexneri isolated in Tehran, Iran.