

## Evaluation of Antibiotic Sensitivity of *Shigella* Spp. Isolated from Clinical Specimens of Milad Hospital, Tehran, Iran

Sormeh Pirayandeh<sup>1,2</sup>; Fereshteh Shahcheraghi\*<sup>1</sup>; Mohammad Rahbar<sup>3</sup>; Maryam Agha abbasi<sup>1</sup>; Fahimeh Shooraj<sup>1</sup>

1-Department of Bacteriology, Pasteure Institute of Iran, Tehran, Iran

2- Department of Biology, science and research branch, Islamic Azad university ,Sanandaj, Iran

3-Department of Microbiology, Iranian Health Refrence Laboratory, Tehran, Iran

s\_pirayandeh@yahoo.com

**Background & Objectives:** Gastro-enteritis remain one of the main cause of morbidity and mortality, especially among children, elderly people, immunocompromised and anorexic people. The increase of antibiotic resistance of shigella species and its spread among patient are the most important issues of shigellosis treatment. Antibiotic resistance has a high impact on the treatment of shigellosis, we checked the antimicrobial resistance pattern of shigella isolated from clinical specimens of Milad hospital, Tehran, Iran.

**Methods:** 35 *shigella* sp. were Isolated from stool and blood of patients during 2010-2011. The samples were cultured in specific media and confirmed as shigella, after biochemical tests were run. further more the antibiotic sensitivity were checked for 11 antibiotics by standard disk diffusion Methods. (CLSI).

**Results:** The results of antibiotic resistants are as below: Imipenem (2/85%), Nitrofurantoin (2/85%), Gentamicin (14/28%), Ceftazidime (14/28%), Cephalothin (31/4%), Tetracycline (74/2%), Cefotaxime (28/5%), Chloramphenicol (14/2%), Co-trimoxazole (100%). All of the tasted isolates were resistant to amikacin and ciprofloxacin.

**Conclusion:** in appropriateness use of antibiotics may cause increasing of resistant to these agents. Since the resistant genes are allocated on mobile genetic elements as integrons and plasmids and can easily be transferred to other bacteria the prescription of some of these antibiotics should be avoided. In this study, a shigella strain resistant to imipenem was isolated. Since, imipenem is one of the beta-lactams used for the treatment of resistant strains to other  $\beta$ -lactams antibiotics, the emergence of this strain can cause risky challenges in treatment of shigellosis.

**Keywords:** Shigella ; Antibiotic Resistance; Disc Diffusion