**ID: 1836**  
**Congress: The First International Congress of Medical Bacteriology**  
**Title: Study of Drug Resistance in Vibrio cholerae isolated from Iran by Phenotypic and Genotypic methods**  
**Authors: 1- *Rahmani F, 2- Imani Fooladi A.A, 3- Marashi M, 4- Nourani M.R, 5- Mehrabadi J.F***

**Abstract:** Background and objective: Antimicrobial resistance is the main problem of universal dimensions with considerable impact on morbidity and mortality. Cholera is a serious epidemic and endemic disease caused by the gram negative bacterium vibrio cholerae. SXT is an integrative conjugation element (ICE) that was isolated from a V. cholerae that encodes resistance to the antibiotics chloramphenicol, streptomycin, sulfamethoxazole, trimethoprim. 107 V. cholerae O1 strains were selected from cholera patients from 2005, 2007 in Iran for studying the antibiotic resistance the presence of SXT constin.

**Methods:** The study was implementation on vibrio cholerae isolated from cholera prevalence in some of provinces in Iran. Bacterial isolation and identification was carried out according to the standard bacteriological methods. MIC and MBC to four antibiotics: chloramphenicol, streptomycin, sulfamethoxazole, trimethoprim were determination by broth microdilution method. PCR was employed to evaluate the presence of established antibiotic resistance genes and SXT constin using specific primer sets.

**Results:** Resistance of clinical isolates to sulphamethoxazole, trimethoprime, chloramphenicol and streptomycin showed 97%, 99%, 99% and 90%, respectively by broth microdilution method. The data obtained by PCR assay showed that the genes sulII, dfrA1, floR, strB and sxt element were present in 95.3%, 95.3%, 81.3%, 95.3% and 95.3% of the V. cholerae isolates, respectively.

**Conclusion:** Antibiotic therapy shortens the period of diarrhea caused by cholera, but the use of antibiotics has assassinated to resistance in V. cholerae.

The Vibrio strains showed the typical multidrug-resistance phenotype of an SXT constin. They were resistant to sulfamethoxazole, trimethopri, chloramphenicol, streptomycin. The antibiotic resistance genes detected includes dfrA for trimethoprim; floR, strB, sulII and int for chloramphenicol, streptomycin, sulfamethoxazole and the SXT element respectively.

**Keywords:** Vibrio cholerae, Antibiotic resistant, SXT element

**Presentation:** Poster