## عنوان مقاله:

Characterization of virulence determinants and antimicrobial resistance patterns in toxigenic clinical isolates of Clostridioides (Clostridium) difficile

## محل انتشار:

بیستمین کنگره بین المللی میکروب شناسی ایران (سال: 1398)

تعداد صفحات اصل مقاله: 1

## نویسندگان:

Abdollah Bazargani - *Department of Bacteriology and Virology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran*

Hamid Heidari - *Department of Bacteriology and Virology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran*

## خلاصه مقاله:

Introduction and Objectives: Clostridioides (Clostridium) difficile infection as a serious healthcare-associated infection can cause life-threatening infectious diarrhea in hospitalized patients. The aim of the study was to evaluate the virulence determinants and antimicrobial resistance patterns of C. difficile isolates obtained from hospitalized patients in Shiraz, Iran. Materials and Methods: This study was performed on 45 toxigenic C. difficile isolates. Determination of toxin profiles was done using polymerase chain reaction method. Antimicrobial susceptibility to vancomycin, metronidazole, clindamycin, tetracycline, moxifloxacin, and chloramphenicol were determined by the agar dilution method. The genes encoding antibiotic resistance were detected by the standard procedures. Results: The tcdA and tcdB genes were detected in 95.6% of the isolates (tcdA+, tcdB+), and 4.4% of strains harboured only one toxin associated gene (tcdA −, tcdB+). The genes encoding CDT were also found in six (13.3%) isolates. Predominant toxin profile (82.2%) was A+ B+ CDT −. Resistance to tetracycline, clindamycin and moxifloxacin were observed in 66.7%, 60% and 42.2% isolates, respectively. None of the strains showed resistance to vancomycin, metronidazole, and chloramphenicol. The distribution of the ermB gene was 57.8% and the tetM and tetW genes were found in 62.2% and 13.3% of the strains, respectively. The substitutions Thr82 to Ile in GyrA and Asp426 to Asn in GyrB were seen in moxifloxacin resistant strains. Conclusion: Our data contributes to the present understanding of virulence and resistance traits amongst the isolates. Infection control strategies should be implemented carefully in order to curb the dissemination of C. difficile strains in hospital.

## کلمات کلیدی:

Clostridioides (Clostridium) difficile, CDI, toxins, antibiotic resistance, Iran

## لینک ثابت مقاله در پایگاه سیویلیکا: