عنوان مقاله:

The first report of the blaNDM carbapenemase genes in Salmonella spp. isolates in Kerman, Iran

محل انتشار:

بيستمين كنگره بين المللي ميكروب شناسي ايران (سال: 1398)

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خلاصه مقاله:

Introduction and Objectives: spreading of multidrug resistant (MDR) strains of Salmonella spp. is an important global health issue. In fact, these MDR strains of Salmonella spp. act as a reservoir and subsequent horizontal spreading of antibiotic resistance genes to non-resistant ones. In this study, we aimed to identify the antimicrobial resistance genes (blaSHV, blaTEM, blaCTX-M and blaNDM) in Salmonella spp., isolated from chicken feces by PCR method. sMaterials and Methods: In this study, a total of 45 Salmonella spp. isolates were collected from chicken feces samples. The isolates confirmed as Salmonella spp. by standard biochemical tests and presence of antimicrobial resistance genes including blaSHV, blaTEM, blaCTX-M and blaNDM determined by PCR methods. Results: The results revealed that 16 (35.5%), 6 (13.4%) and 1 (2.3%) of Salmonella spp., carried blaTEM, blaNDM and blaCTX-M genes, respectively, while blaSHV gene was not detected. Conclusion: The blaTEM, blaNDM and blaCTX-M genes are common among the Acinetobacter spp., Escherichia coli and Klebsiella spp and numerous isolates from human patients, and some environmental niches such as water and sewage and also recently have been isolated from farm (livestock) animals in China. Based on our results presence of blaTEM, blaNDM and blaCTX-M genes in investigated isolates indicates a serious alarm for the prevalence of these genes and subsequent spread from animals to people.

We recommended that the use of antibiotics in chicken food must be tightly regulated to avoid such outcomes

کلمات کلیدی:

Salmonella, Antimicrobial resistance genes, PCR

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