Abstract

Extended-spectrum beta-lactamase of TEM, CTX-M and SHV type is considered as an Important mechanism resistant to cephalosporin in gram- negative pathogen and is widely increasing. *Klebsiella pneumonia* species are able to produce extended-spectrum beta- lactamase (ESBLs). The aim of this study was to detect the prevalence of TEM, CTX-M and SHV genes in ESBLs produsing *Klebsiella pneumonia* isolated form patients hospitalized in Zahedan hospitals by using PCR method. In this analytical- descriptive study antibacterial susceptibility patterns of 100 *Klebsiella pneumonia* tested to Cefotaxim, Ceftazidim, Cefteriaxon, Cefixime, Gentamicin, Tetracyclin, Nalidixic acid, Imipenem, Co- Trimoxazole, Ciprofloxacin and Azithromycin using disk diffusion method. In addition, confirmatory test for detecting ESBLs phenotypes was performed using Cefotaxim-Clavulanic acid combination disk. The presence of TEM, CTX-M and SHV genes were assessed by using PCR. Confirmatory phenotypic test showed 59% of the isolates were ESBL positive. The prevalence of CTX-M and SHV genes in isolated *Klebsiella pneumonia* was 50% and 81% respectively. TEM genes not found in any of the isolates. High frequency of CTX-M, TEM and SHV genes in ESBL produsing isolates indicates that this enzyms plays an important role in resistance to beta lactam containing anti biotics.

Keyword: *Klebsiella pneumonia* -Extended-spectrum beta-lactamase, *bla TEM*, *bla CTX-M*, *bla SHV genes*

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