

Detection of sequence type 131 in multi-drug resistant uropathogenic Escherichia coli isolates from two hospitals of Sabah

Abstract

Background: Escherichia coli sequence type 131 (ST131) has emerged among bacteria causing urinary tract infection (UTI) in the previous decade. This ST contains multiple drug resistant (MDR) genes together with genes encoding many virulence factors. As a result, this strain of uropathogenic E. coli (UPEC) gives rise to treatment failure with consequent prolonged stay in a hospital. Therefore, earlier identification of this strain in the hospital has advantage in combating severe type of UTI.

Objective: To detect ST 131 strains in MDR UPEC isolates from two hospitals of Sabah.

Materials and Methods: Antibiotic susceptibility tests were performed to detect MDR isolates. Two polymerase chain reactions (PCRs) including mdh and gyrB allelic-specific PCR were performed on these MDR to detect ST131 strains.

Results: The results showed four isolates were resistant to TMP-SMX, gentamycin, ciprofloxacin, and cefotaxime, and three isolates of these were investigated to be ST131 clones by two PCR reactions.

Conclusion: There is the presence of ST131 strains in hospitals of Sabah. This information will be a guideline for the clinician in the management of UTI in the clinical settings.