Incidence of Klebsiella pneumonia in street foods sold in Malaysia and their characterization by antibiotic resistance, plasmid profiling, and RAPD-PCR analysis

Abstract

A total of 78 samples of street foods from different states in Malaysia were examined for the presence of Klebsiella pneumonia. K. pneumonia contamination was recorded in 32% of the samples examined. The frequency of the K. pneumonia isolates containing plasmids was shown to be 48%. Susceptibility testing showed that all isolates were highly resistant to ampicillin (100%), erythromycin (100%), rifampicin (100%), streptomycin (96%) and sulfamethoxazole (80%), but susceptible to chloramphenicol. RAPD proved to be the most effective technique in discriminating the K. pneumonia isolates since dendrogram constructed using the combination of 4 primers could differentiate 25 isolates of K. pneumonia to 25 strains. This is the first report that revealed the occurrence of K. pneumonia in street foods sold in Malaysia.

Keyword: Street foods, Klebsiella pneumonia, Plasmid, Antibiotic resistance, RAPD, PCR