

Characterization of *Vibrio vulnificus* isolated from retail cockle and shrimp by plasmid profiling and antibiotic susceptibility test

ABSTRACT

Of the 148 cockle (*Anadara granosa*) and 433 shrimp (*Penaeus indicus*) samples examined, 27% and 6.9% were positive for *Vibrio vulnificus*, respectively. Twenty-nine and 21 isolates from cockles and shrimps were examined for their antibiotic resistance. All isolates showed resistance to one or more of the antibiotics tested. In transconjugation tests, no relationship was found between the high molecular weight plasmid (35.8 MDa) detected in several isolates and their resistance phenotypes, indicating that their antibiotic resistance is chromosomal. Plasmid profiles and antibiotic resistance patterns were used as a preliminary approach to type, at strain level, the isolates from cockles and shrimps. Analysis by antibiotic resistance patterns showed a high phenotypic polymorphism. However, the high number of isolates devoid of plasmid rendered this technique less useful. These results indicate that multiresistant *V. vulnificus* isolates exhibiting genotypic or phenotypic variations are easily recovered from cockles and shrimps in the study area, posing a potential public health risk.

Keyword: *Vibrio vulnificus*; Shrimp; Cockle; Antibiotic resistance; Plasmid