Isolation and identification of *Vibrio cholerae* and *Vibrio alginolyticus* in fishery products

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Vibrio cholerae and *Vibrio alginolyticus* are halophilic, Gram-negative bacteria species. These species are natural inhabitants of aquatic ecosystems around the world, mostly present in salt and brackish waters. These bacteria are responsible for food poisoning in humans, which occurs after consuming fishery products or seafood. In many cases, these infections tend to be serious for the host.

METHODOLOGY. The isolation and identification of *V. cholerae* and *V. alginolyticus* was carried out as mentioned in Chapter 9 of the Bacteriological Analytical Manual (BAM-FDA). Fishery products (shrimp, oysters, fish fillets, and clams), were collected from different establishments located in Mexico City. 50 g of sample were diluted in 450 mL of alkaline peptone water. Two series of dilutions (Series A and Series B) were incubated at 42°C and 37°C for 24 h, respectively. The dilutions were then plated on Thiosulfate Citrate Bile Salts Sucrose (TCBS) agar, and after 24 hours of incubation at 37°C, yellow colonies were selected. Gram staining, catalase, oxidase and halophilism test (using NaCl concentrations of 0%, 3%, 6%, and 10%) were carried out for each isolate. Isolates identified as Gram-negative bacilli that grew in a medium with 3% NaCl and positive result in the catalase and oxidase tests were subjected to biochemical tests for presumptive identification.

RESULTS. In this study, 21 samples were collected (oysters: 9, fish: 4, shrimp: 6, crab: 2). *Vibrio cholerae* was isolated in oysters, fish and crab, resulting in prevalence of 18.5%, getting five isolates identified.

CONCLUSION. It was observed that *Vibrio cholerae* was isolated mainly from bivalves samples, however it was present in other kind of fishery products.

References

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