

A mini review : cholera outbreak via shellfish.

ABSTRACT

Problem statement: Food borne illness occurs all over the world. *Vibrio cholerae* is the etiological agent of cholera which is spread by contaminated food, water or direct fecal contact with food handlers. There are also examples of sporadic outbreaks of illness attributed to raw products eaten unprocessed. Consequently, there was a widespread concern that food in international trade carries pathogenic microorganisms that could result in outbreaks of illness. **Approach:** A review was done on the role of shellfish and seafood in the transmission of cholera. Google, Pubmed and Scopus were used in preparation of this review. **Results:** This review clarified that shellfish is one of the main seafood sources for the transmission of cholera. In natural waters *Vibrio cholerae* can be presented in both free-living state or attached to copepods, zooplankton and algae. *Vibrio cholerae* can adhere strongly to the shellfish digestive tract and cannot be effectively removed by rinsing the shellfish or by depuration. Colonization or attachment of *Vibrio cholerae* to shellfish increased the resistance of these bacteria to heat, drying and low pH. **Conclusion:** Therefore, sea food in general and shellfish in particular provided suitable background for cholera outbreaks. Unfortunately, this mode of transmission was underestimated. Accordingly, proper cooking, storing and re-heating of foods before eating were considered as main safety measures for preventing food-borne transmission of cholera. It was recommended to reconsider this mode of transmission for cholera again as source of cholera epidemics.

Keyword: Food borne illness; *Vibrio cholerae*; Copepods; Sea food.