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Short Communication

Panulirus homarus (Lobster) isolated by antibiotics against *vibrio*

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The sensitivity of 28 isolates of *Vibrio* spp. isolated from the edible muscle of lobster was compared using commonly used antibiotics. The *in vitro* susceptibility of the isolates was studied by disk diffusion method using disks contained tetracycline, ampicillin, penicillin, doxycycline, streptomycin and erythromycin. All bacterial strains studied in this research showed high degree of resistance to the antibiotics used in both human medicine and those employed in aquaculture which is of great importance.

Key words: *Vibrio* spp., antibiotic susceptibility, lobster.

INTRODUCTION

Vibrio infection usually occurs in marine and estuarine environments and has been reported through the world. Vibriosis is caused by gram negative bacteria in the family of Vibrionaceae. The major *Vibrio* species isolated from fish, shrimp and lobster are *V. parahaemolyticus, V. harveyi, V. alginolyticus, V.vulnificus*, *V. anguillarum* and *V. fluvialis* (Grisez et al., 1997; Verdnock et al., 1997; Hosseini et al., 2004). Most of the *Vibrio* species are pathogenic for human and usually responsible for causing alimentary infections in some countries where fish or shellfish are consumed raw or lightly cooked (Amaro et al., 1997). Currently, 12 species of *Vibrio* genus are known to be associated with human infections acquired by consumption of contaminated foods and water (Mead et al., 1999). *Vibrio* spp. were reported for the first time in Japan as a cause of gastroenteritis (Fujino et al., 1951), where *V. parahaemolyticus* is implicated as a cause of at least a quarter of food borne diseases (Feldhusen, 2000) mostly after the consumption of raw or undercooked seafood (Farmer et al., 2003). *V. vulnificus* is associated with severe wound and soft tissue infections and even septicemia especially in children or persons with compromised immune system. This pathogen is responsible for 0.1% of the food borne diseases with hospitalization and for 1% of the foodborne deaths in the USA (Mead et al., 1999) . Hence, the present study was undertaken to determine the degree of antibacterial resistance of *Vibrio* spp. isolated from lobster in the Persian Gulf.

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MATERIAL AND METHOD

Isolation and identification *of Vibrio* spp.

Sixty lobsters (*Panulirus homarus*) were caught from Hendijan in south coast of Iran during October to December 2009. The samples were transferred to the laboratory in appropriate conditions. In the laboratory as a first step, 225 ml of alkaline peptone water (APW) was added to 25 g of homogenized lobster flesh and incubated at 37°C. The samples of flesh were cultivated on thiosulfate citrate bile salts sucrose agar (TCBS, BD diagnostics, Heidelberg, Germany) and on modified cellobiose polymyxin-B colistin agar (MCPC). After incubation at 37°C for 24 h, the isolates were used for further screening tests including Gram staining, oxidase and catalase tests and culture in SIM and TSI media and other biochemical tests described by Hosseini et al. (2004).

Antibiotic susceptibility test

Antibiotic susceptibility tests were performed using the disk diffusion method on Mueller-Hinton agar (Oxoid) according to the national committee of clinical laboratory standards (NCCLS) (2002). Disks containing the following antibiotics were used: Penicillin G (10 U,