

Vibrio ponticus, a new pathogen of cultured cobia

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Most of the members of the family Vibrionaceae are natural inhabitants of marine and estuarine ecosystem and several of them are pathogens in cultured aquatic organisms. Vibriosis caused by some pathogenic *Vibrio* spp., can cause huge mortality in marine fish culture systems. Intermittent mortality with haemorrhagic lesions on the fin, body surface, and head, exophthalmia (Fig.1) and stopping of feeding activity were noticed in cobia (25±5 cm length; 17±4 g weight) reared in sea cages off Polem, Goa during June 2015. The clinical signs lasted for a week with a total mortality of 12%. Isolation of bacteria aseptically from liver and kidney was done.

While the lesions in the present case mimicked typical haemorrhagic septicemia normally seen in vibriosis caused by *Vibrio alginolyticus* and *V. harveyi* in cultured marine fish, *V. ponticus* could also be isolated from liver and kidney of the moribund cobia. The isolated bacteria were confirmed by biochemical and molecular tools. The isolation of *V. ponticus* from diseased fish has not been reported from India so far. The isolate was found to be sensitive to most of the antibiotics except oxacillin for which it was resistant. The bacteria were able to grow up to 40 °C. Interestingly, so far there have been no reports on isolation of *V. ponticus* from cobia. *V. ponticus* was



Fig. 1. Haemorrhagic lesions and exophthalmia in cobia infected with *V. ponticus*

first isolated from mussel, seabream and sea water from Spain (Macian *et al.*, 2004 *System. Appl. Microbiol.*, 27: 535-540). The bacterium was also isolated from the snapper *Lutjanus guttatus* (Gomez-Gil *et al.*, 2006, *J. Appl. Microbiol.*, 102: 1518-1526). Mass mortality of Japanese seabass (*Lateolabrax japonicus*) in China was found to be due to *V. ponticus* (Xie *et al.*, 2007, *Lett. Appl. Microbiol.*, 45: 62-67). Isolation and identification of *V. ponticus* and its role in causing mortality in cage cultured cobia requires further investigations considering its virulence in cultured marine fish.