Occurrence, antibiotic usage and antibiotic resistance of *Vibrio parahaemolyticus* from farmed shrimp in Mekong delta, Vietnam

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Acute hepatopancreatic necrosis disease (AHPND) caused by *Vibrio parahaemolyticus* has resulted in significant economic losses in shrimp production in Vietnam. Previous studies reported that *V. parahaemolyticus* showed multiple-antibiotic resistance due to the misuse of antibiotics to control pathogenic infections in aquaculture. There is a lack of information on the use of antibiotics by shrimp farmers and the knowledge regarding the presence of *V. parahaemolyticus* in the Mekong Delta, Vietnam. This study aimed to investigate the incidence of pathogenic *Vibrio parahaemolyticus* and assess the antibiotic resistance profile as well as to perform the antimicrobial susceptibility test in *V. parahaemolyticus* isolates in the Mekong Delta, Vietnam. The study was carried out through a survey on the use of antibiotics in 76 grow-out shrimp farms and identification of the occurrence of AHPND pathogenic *V. parahaemolyticus* isolates in a total of 396 shrimp, water and mud samples collected in the Mekong Delta, Vietnam. 47 AHPND pathogenic *V. parahaemolyticus* isolates were tested for sensitivity to 13 antibiotics. The results showed that the presence of AHPND pathogenic *V. parahaemolyticus* isolates was 12.37% in the total of 396 samples. Oxytetracycline, doxycycline and enrofloxacin were the most common antibiotics used in shrimp farms. The study showed high percentage of amoxicillin and ampicillin resistance (80.85% and 78.72%, respectively) by AHPND pathogenic *V. parahaemolyticus* isolates, suggesting these two antibiotics should be excluded in the treatment of *V. parahaemolyticus*.

Biography

Thu Diem Nguyen has completed her PhD from University of Tasmania, Australia. She is a Researcher at Research Institute for Aquaculture No. 2, Vietnam. Her research interests focus on various aspects of “Fish health, such as fish bacteriology, fish vaccination, fish immunology and fish pathology”.

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