Aeromonas veronii Infection in Cultured Channel Catfish, *Ictalurus punctatus*, in Southwest China

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Abstract

*Aeromonas* spp. are ubiquitous inhabitants of aquatic ecosystems, and are increasingly being reported as important pathogens for aquatic and terrestrial animals, as well as humans. A common bacterial disease caused by *A. veronii* has appeared in cultured channel catfish producing symptoms of erythema, hemorrhages, skin ulcers and high mortality (>30%) in China, causing great economic loss. From 2007 to 2013, diseased channel catfish, *Ictalurus punctatus*, displaying symptoms of septicemia, ulceration, or abdominal dropsy were collected from Southwestern China. The goals of this study were to identify the bacterial strains isolated from diseased fish and to determine the susceptibility of the pathogenic strains to many currently available antimicrobial agents. 18 bacterial isolates were obtained from diseased fish. Based on phenotypic characteristics and 16S rRNA gene sequence analysis, all isolates were identified as *A. veronii*. These results indicate that the microbiological risk posed by *A. veronii* is considerable for channel catfish cultured in Southwestern China. Susceptibility of the isolates to antibiotics was tested using the agar dilution method. All 18 *A. veronii* isolates were sensitive to florfenicol, norfloxacin and chloramphenicol, and were resistant to cefradine, clindamycin, midecamycin, penbritin, and amoxicillin. There were sensitivity diversities of the 18 *A. veronii* isolates to other test antibiotics such as sulfamethoxazole, deoxyxycline, gentamycin, tobramycin, and more. This in vitro study provides enough data to recommend the use of these antibiotics for treating infectious diseases caused by *A. veronii*.

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