

Streptococcus agalactiae the etiological agent of mass mortality in farmed red tilapia (Oreochromis sp.).

ABSTRACT

Streptococcal infection was reported to cause significant mortality and high economical loss in freshwater and saltwater fish species including tilapia species, worldwide. Recently, few disease outbreaks affecting cultured red tilapia in Selangor state, Malaysia was investigated. Affected fish showed loss of appetite, serpentine swimming and exophthalmia. Sick and healthy appeared fish were clinically examined and samples from brain, liver, spleen and kidney were collected for agent isolation. All isolates were gram-positive, oxidase-negative, catalase-negative, β -haemolytic cocci and were characterized as a Group B Streptococcus agalactiae (GBS) using commercial identification kits (Streptococcal grouping Kit, RapID™ STR System and BBL Crystal GP ID Kit). The isolates were sensitive to amoxicillin, ampicillin, erythromycin, chloramphenicol, linomycin, rifampicin, vancomycin, gentamicin, sulfamethoxazole + trimethoprim and tetracycline. In contrast, they were resistant to neomycin, amikacin, kanamycin and streptomycin. Specific Polymerase Chain Reaction (PCR) and 16S rRNA sequencing technique results confirmed the isolates as a GBS. Results of this current study indicated that the Streptococcus agalactiae infection started to spread and warrants focusing on ways to prevent and control the disease before it become endemic

Keyword: Bacteriology; Identification; Kanamycin; Oreochromis sp.; Streptococcus agalactiae; Warrants.