Study on ethiology of some cases of Streptococcosis in Asian Sea bass (Lates calcarifer) in cage cultures of Iran

Abstract:

Asian Sea bass fish has recently entered the country as a cultivated species. It is highly cultivated, economical and marketable. Considering the ability to tolerate a wide range of salinity, it can be introduced as a suitable breeding method for sweet water resources. Over the last few decades, aquaculture has been increasing in the supply of seafood. In the asian Sea bass or barramundi industry, one of the common diseases of Streptococcosis, caused a severe damage to the production economy each year. Streptococcos is a germ-positive cocci, facultative anaerobe small gram-positive cocci, often seen in long chains as high as 0.3-0.5 micrometres. In order to isolate and determine the frequency of Streptococcus bacteria, cases of healthy fish and fish with symptoms (from lesions and organs intestine, liver, kidney, brain and eyes) using common culture medium (TSA) in a common culture method. At first, the anterior and brainstems were completely linearly cultured in a perfectly sterile conditions and flame by loop from the samples, then cultured on a TSA medium (3.5%), then incubated for 24 hours, and from colonies Grown on the culture medium after purification, Catalase and oxidase tests, and gram staining. The results of the study showed negative catalase, negative oxidase, gram positive and cocci cluster under microscope. The adaptation of the apparent symptoms of contaminated fish and biochemical tests such as sorbitol, intitule, arabinose, raffinose and lactose sugars with the Streptococcus bacterial biochemical charts showed the highest probability of occurrence of streptococcosis. However, the most reliable method for detecting a bacterial species is molecular testing such as PCR. In this experiment, PCR was investigated by LOX primer and the accuracy of fish involvement with Streptococcus bacteria was determined. In this study 13 isolate of *S. ineae* identified in the studied cases.

Keywords: Fish, Asian siblings, bacteria, Streptococcosis