Suez Canal University
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Advanced Studies on Diagnosis and Control of Prevailing Bacterial Diseases in some Marine Fishes

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English Abstract

A total number of three hundreds (300) naturally infected freshly caught marine fishes divided as 100 seabass *(Dicentrarchus labrax),* 100 seabream *(Sparus aurata)* and 100 *Tilapia zillii* were collected randomly and seasonally from Lake Temsah in Ismailia governorate. Fishes were subjected to clinical, postmortem and bacteriological studies to isolate and identify the bacteria causing the diseases. The most isolated bacteria were *Pseudomonas aeruginosa* , *Aeromonas sobria* and *Proteus vulgaris* which identified by using traditional methods and Vitek 2 system. The identification of pathogenic *Pseudomonas aeruginosa* was confirmed by detection of 16s rDNA gene and two virulence genes (*toxA and oprL*) in the selected five isolates using PCR. The total prevalence of *Pseudomonas aeruginosa in* naturally infected Seabass *(Dicentrarchus labrax*) and *Tilapia zillii* in different seasons was 34 and 45% respectively. The highest prevalence in Spring followed by Summer then Autumn while the lowest prevalence was in Winter. The total prevalence of *Aeromonas sobria* isolated from seabream (*Sparus aurata)* seasonally was 29%, While the total prevalence of *Proteus vulgaris* was isolated from seabass (*Dicentrarchus labrax*) was 20 and 25% from *Tilapia zillii* with highest prevalence was recorded in Summer followed by Spring then Autumn while the lowest prevalence was in Winter. *Pseudomonas aeruginosa* and *Aeromonas sobria* were isolated with high prevalence from liver, kidneys and spleen and the lowest prevalence was recorded from gills while *Proteus vulgaris* was isolated with high prevalence from liver and gills . The experimentally infected *Tilapia zillii* by intraperitoneal route (I/P) with *Pseudomonas aeruginosa , Aeromonas sobria* and *Proteus vulgaris* showed the same signs recorded in the naturally infected marine fishes. The mortality rate represented 80, 60 and 30% respectively of the total fish. Addition of Tumeric powder with different concentrations as 2, 5, 10g/kg basal diet for treatment of *Tilapia zillii* infected with *Pseudomonas aeruginosa* by increasing the resistance of fish against bacteria .The mortality rate of experimentally infected *Tilapia zillii* fed on supplemented diet was 40, 20 and 10% respectively. These results indicated that Tumeric powder act as immunostimulant and antimicrobial through it lead to increasing concentration of hemoglobin (Hb)**,** numbers of RBCS, Hematocrit value (HCT) , lymphocytes percentage and total proteins.

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