

MYCOBACTERIUM MARINUM INFECTION LINKED TO A GAMBLING FISHING POND IN SOUTHERN TAIWAN: ENVIRONMENTAL INVESTIGATION

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BACKGROUND/AIMS: To describe a patient with *Mycobacterium marinum* tenosynovitis associated with fish spine injury in a gambling fishing pond in southern Taiwan and to characterize the source of *Mycobacterium marinum*, environmental water and fish surveillance, PFGE typing and a structured questionnaire for potential outbreak investigation.

METHODS: We performed an environmental microbiologic study among a fishing pond in southern Taiwan to clarify the source of *M. marinum* infection, as well as in vitro golden fish infection experiment, PFGE typing and structured questionnaire investigating the source of infection.

RESULTS: Although *M. marinum* was not isolated from 54 samples (27 fishes). *M. marinum* was isolated from environmental ponds, underground and dirty drainage water and shared the same PFGE pattern with our patient. Necropsy of fish did not find any evidence of mycobacterial infection. Golden fish experiment observed for 3 months did not induce mycobacterial infection. A structured questionnaire showed an association between fishing in this pond and injury by *Lateolabrax japonicus* (Spearman's correlation test $r=0.764$, $P= 0.01$).

DISCUSSION/CONCLUSIONS: Our investigation showed that the infection source of our patient was associated with fish spine injury in this gambling pond and the origin of *M. marinum* was from ponds water and not from the fish itself. The role of playing gambling fishing in patient infection needs further evaluation.

Key words: Environmental water sampling, *Mycobacterium marinum*, tenosynovitis