การศึกษาปลาดิบเพื่อป้องกันการแพร่กระจายของพยาธิตับในปลา

The Study of irradiated fish for prevention

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Abstract

The experiment was designed to find the minimal effective dose (MED) of irradiation that can inhibit the maturation of O. viverrini. The parasite life cycle was established and maintained in laboratory and the animal model for bioassay was investigated. Hamster was found to be the appropriate model and was used in all experiments.

Pure metacercariae (metacercariae dissected from fish before irradiation) were exposed to 0.1, 0.2, 0.3, and 0.5 kGy. No physical change was observed in the exposed metacercariae. The MED was found to be 0.1 kGy. When whole infected fish was irradiated and metacercariae fed to hamsters, the MED was also 0.1 kGy. However, due to technical error either the irradiation techninique or parasitological manipulation, one hamster from each group receiving 0.2 and 0.3 kGy irradiated metacercariae was found to have one adult fluke. This fluke has no significant difference in morphology from that of the control, except the eggs in the uterus and in the master's gall bladders were not well developed

In conclusion, the results suggested that 0.1 kGy appears to be the MED of liver fluke in fish. However, fish irradiation to control liver fluke infection in the rural communities may be difficult since the transmission of this infection is normally from the home made dish prepared from fresh fish available all water beds.