

Opisthorchiasis and Hypophyseal Thyroid System Abnormality: Actual Problem or Coincidence

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Letter to Editor

Dear Editor, the liver fluke infestation caused by *Opisthorchis viverrini*, infection is very common in tropical Southeast Asia. This infection can cause chronic liver problems and can induce carcinogenesis at the hepatobiliary system. The long-term chronic opisthorchiasis is proved as an important cause of the hepatobiliary cancer, namely cholangiocarcinoma. The patient with cholangiocarcinoma usually has extremely severe disease and ends up with death [1]. The high incidence of cholangiocarcinoma in Indochina is believed to be due to the high incidence of opisthorchiasis. This infection is related to the consumption of raw fish, which is the common eating behavior of local people in Indochina. The contamination of the infective *metacercariae* in fresh water fish is common in Indochina and if there is no good cooking before ingestion, the parasite will still exist and can cause infection to anyone who ingests it. At present, the attempt to control opisthorchiasis becomes the important local public health policy. Nevertheless, the continuous attempt is still necessary since there is still no favorable outcome of control campaigns. Sripa and Echaubard noted that "despite extensive public health prevention campaigns led by the government, the prevalence of *Ov* infection is still high. High infection rates result from cultural and ecological complexities where wet-rice agrarian habitats, centuries-old raw-food culture, and the parasite's complex biology combine to create an ideal transmission arena [2]."

In addition to hepatobiliary abnormality, there are also some reports on the extrahepatic disorder due to opisthorchiasis. The effect on the neurological system is very interesting. Focusing on the brain pathology due to opisthorchiasis, there is still no official report on the direct problem. Nevertheless, there is an interesting report on other liver fluke. Ying et al. recently reported a case of ectopic parasitism due to *Fasciola hepatica* [3]. In that case, the larvae burrow through a human brain and mimic cerebral aneurysm was reported [3]. Nevertheless, there are some reports on the neuroendocrine organ and the interrelationship with opisthorchiasis. Some Russian reports noted that the chronic opisthorchiasis can induce the abnormalities of the hypophyseal-thyroid system [3-5]. There is still no explanation for the observed relationship. Lepikhin et al. proposed that "The imbalance of thyroid hormones activity is likely to be associated with hepatobiliary

dysfunction [3]." According to the report by Lepikhin et al., "the decrease of T3 and T4 in the presence of normal TTG level was found [3]." An important question is whether there is any direct effect of opisthorchiasis on the neuroendocrine organ. In Indochina, the high incidence of thyroid dysfunction is also observable. It is an interesting question on the co-high-incidence of both opisthorchiasis and thyroid dysfunction. A systematic epidemiological study is required for clarification of the problem. At the same time, there should be an in-depth study to assess the exact neuroendocrine gland pathology in opisthorchiasis. The main question is the concurrent high incidence of thyroid dysfunction and opisthorchiasis is only an accidental finding due to different pathological pathways or not. Finally, in addition, there is also the report from Russia on the neuro-psychic disturbance. Mf d