

Disease and Environment: Implications of Clonorchiasis Infection in Taiwan and Mainland China

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Abstract

Clonorchiasis is an infectious disease caused by *Clonorchis sinensis* (Chinese liver fluke) and it is a food-borne zoonosis. The transmission of *Clonorchis sinensis* forms a cycle among the parasite, the intermediate hosts and the final hosts. Rivers, lakes and ponds provide suitable environment for this parasite to survive, but it is human actions that make this cycle of transmission to run over and over again.

Archaeological excavations in China during 1956-1994 found seven cases of human infections of *Clonorchis sinensis* in Hubei, Hunan, Guangdong, and Fujian; these cases revealed that Clonorchiasis existed in South China at least from 2,300 years ago. A practice that induced the propagation of *Clonorchis sinensis* by feeding fresh water fishes with feces could be traced in Chinese history at least back to the mid Northern Song Dynasty (960-1127). Moreover, the custom of eating raw or half-cooked fish had a long tradition in China. This cuisine provides a chance for metacercariae of *Clonorchis sinensis* to enter human body and induces diseases related to liver and gallbladder. The custom of feeding cats and pigs with fishes also helps in producing animal hosts around the living environment of the people.

In modern world, Clonorchiasis became epidemic in Japan, Korea, China, Taiwan, and Vietnam. In Japan the infection rate reached more than 50% in 1883, but there was no more infection in 1991. In Korea, the infection rate was over 40% in the 1950s, but it was reduced to around 2% during 1982-1992. In the early 21st century, estimations revealed that 3.5 million people around the world were infected, of which 1.5 million were in China.

This paper is attempted to give an overview of Clonorchiasis infections in Taiwan and mainland China with available literature and maps are charted to show variations in different provinces.