

# REVIEWS

MAN has developed varied methods of preserving and preparing meals to increase its flavour, but unknowingly has to suffer for consuming such appetising food.

The flukes and the pathological processes found in man is briefly described below. By far, the commonest and well known fluke is the blood fluke causing Schistosomiasis. Its familiarity to doctors needs no further mention at present. The other flukes, some unheard of are the intestinal, liver and lung flukes. Snails act as intermediate host for the development of the parasite. Meta-cercariae encyst on vegetation or without the body of fish and is the source of infection in man.

## INTESTINAL FLUKES :

1. *Fascioliasis* is caused by *fasciola hepatica*. Contaminated lettuce is the source of infection. Migration of the larva causes hepatitis. Cholangitis cholecystitis with cholelithiasis are later complications. Halzoun (Marrara) occurs in the Middle East by eating raw liver resulting in acute dysphagia and laryngeal obstruction.
2. *Heterophyiasis* is caused by *Heterophyes Heterophyes* and is prevalent in India, Egypt, Philippines and South China. Infection occurs by eating raw or salt fish (mullet). Kean and Breslan have reported that 14.6% of fatal heart cases in

## Fluke Infections

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Philippines result from heterophyid myocarditis.<sup>1</sup> In Egypt, many cases have been cured by piperazine derivatives.

3. *Metagonimiasis* is prevalent in the Far East, Indonesia, Spain and the USSR and is caused by *Metagonimus Yokogawai*. Raw or undercooked fish (trout) is the source of infection. Myocardial involvement also occurs. The life span of the fluke is 20 years. Occasional cures have been reported by heavy doses of chloroquin.

## LIVER FLUKES :

1. *Fasciolopsiasis* is caused by a large fluke *fasciolopsis buski* which is found mainly in China but also in India, Thailand, Malaya, Indonesia, Taiwan and Europe. It is estimated that 10 million people are infected with *Fasciolopsis buski* in the Far East. The adult measures 7.5 cms. Infection occurs by eating raw water plants. Oedema of the face, legs and ascites occurs.
2. *Clonorchiasis* is commonly seen in the Far East. Infection occurs by eating undercooked fish. The prevalence in Hong Kong is 25%. The disease begins in

children, 2 years of age, rising to 80% in persons aged 51-60 years. The life span of the fluke is 25-30 years. The fluke has been noted in the livers on 65% of the post-mortem examination in Hong Kong.<sup>2</sup> Epigastric pain, fever, jaundice, cholangitis, pancreatitis may occur. Clonorchiasis is also responsible for the occurrence of primary adenocarcinoma of the liver. Metastases may be found in the lungs, suprarenals, liver, kidney, heart and brain.

Diagnosis : Direct faecal smear examination for ova of *Clonorchis Sinensis*.

3. *Opisthorchiasis* is caused by eating raw fish containing metacercariae of *Opisthorchis Felineus* in the Philippines, India, Japan, Vietnam, Eastern Europe and USSR and of *O. Viverrini* in Thailand and Laos. The disease is endemic in North East Thailand where 90% of the population over the age of 10 are infected with *O. Viverrini*. The source of the infection is a popular dish called 'Keompla'.<sup>2</sup> The clinical picture is the same as *Clonorchiasis*. The ova are "indistinguishable" from *Clonorchis Sinensis*. Cholangiography reveals the typical radiological patterns.

## LUNG FLUKE :

*Paragonimiasis* is caused by *Paragonimus Westermani*. The

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endemic areas are Korea, Japan, Philippines, Taiwan, Central China, Nepal, Thailand, West Africa & South America. Infection occurs by eating crabs and cray fish soaked in vinegar. Walton and chy reported that during a measles epidemic in Korea, 80% of Paragonimus infections were produced by the medicinal use of fluid extracts of crushed crabs. Clinically the first symptoms are cough, haemoptysis and later signs of bronchiectasis or lung abscess. Cerebral symptoms occur in about 25% of patients. The possibility of the prevalence of paragonimiasis of the lung in Koreans was made known to Dr. Ilyas Khan, who studied the cases not responding to antituberculosis drugs and proved by sputum exami-

nation for the presence of the ova, its definitive diagnosis in two reported cases recently. Paragonimiasis in ectopic locations i.e. myocardium, liver, brain may present as hepatitis, meningitis, myelitis and Jacksonian type of Epilepsy. The presence of the ova in the sputum or stool confirms the diagnosis.

*Conclusion :* Fluke infections do exists in Bahrain but the disease is limited to those individuals arriving from endemic areas. Spread of the diseases mentioned cannot occur due to the absence of the snail hosts. Travellers proceeding to endemic areas should avoid eating raw water plants and undercooked crabs or fish.

## REFERENCES

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