

A CASE OF CLONORCHIS INFECTION IN SINGAPORE—CLINICAL AND PATHOLOGICAL FEATURES

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The liver fluke, *Clonorchis sinensis*, is endemic in China, Japan, Korea, Formosa and Vietnam (Faust and Russel, 1964). Human infection with this parasite is uncommon in Singapore and most of the infections have been acquired from the endemic countries (Andrews and Shrimpton, 1938). Recently we described a case of clonorchiasis in a man who has not been to any of the endemic countries. It is possible that he might have acquired the infection locally through eating raw fresh-water carps (*Ctenopharyngodon idellus* and *Aristichthys nobilis*), the fry of which is imported from China. The parasitological details have been described elsewhere (Kan and Cheah, 1970); the patient has since died and this paper describes the clinical and pathological features.

CASE REPORT

L.K.L., a 41-year-old Chinese plumber, presented with congestive cardiac failure due to syphilitic aortic incompetence and aneurysm of the abdominal aorta. He was not jaundiced and the liver was enlarged to 3 fingerbreadths below the right costal margin.

A routine faecal examination revealed the presence of ova of *Clonorchis sinensis* (Fig. 1). The patient was born and bred in Singapore and had never been to any of the endemic countries.

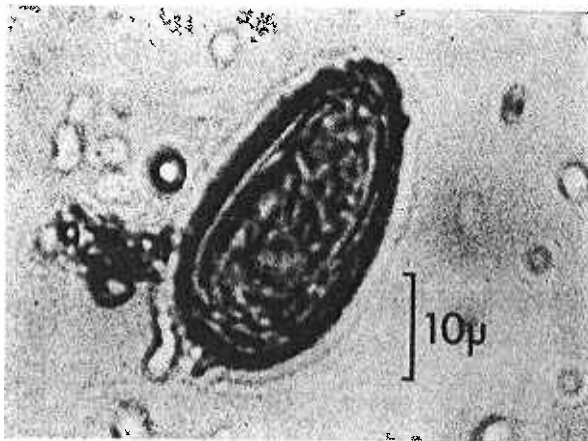


Fig. 1. Ova of *Clonorchis sinensis* in the faeces.

He was fond of eating raw or partially cooked fresh-water carps for many years.

He was treated for his cardiac failure and for his clonorchiasis he was given chloroquine diphosphate orally, 500 mg. daily (Komiya, 1966). After being on chloroquine for 2 weeks, he died of heart failure. An ova count (formalin-ether sedimentation method) before treatment varied between 1000 to 1500 ova per gram of faeces and following chloroquine therapy it fluctuated between 1680 to 3040 ova per gram of faeces.

A postmortem examination confirmed that death was due to congestive cardiac failure and the presence of syphilitic aortic incompetence and aortitis and atherosclerotic saccular aneurysm of the abdominal aorta (6 cm. in diameter arising just above the origin of the renal arteries). Adult *Clonorchis* (Fig. 2) were found in the bile ducts; none was found in the gall bladder or pancreatic duct. The liver was enlarged and weighed 1350 gms. Histologically there was severe venous congestion but there was no cirrhosis. An adult *Clonorchis* was seen in a dilated bile duct (Fig. 3). Most of the bile ducts were hyperplastic and proliferation of the bile ducts was seen in the portal triads (Figs. 4 and 5). The gall bladder, pancreatic duct and pancreas were normal. Besides venous congestion, the other systems were normal.

DISCUSSION

Though *Clonorchis sinensis* infection in man in Singapore has been reported once before by Andrews and Shrimpton (1938), we believe that the possibility exists that our patient acquired the infection locally. While he claimed that he was born in Singapore and had never been to any of the endemic countries, the validity of this statement cannot be proven beyond doubt. Attempts to find the metacercaria of *Clonorchis* in the fresh-water carps that our patient was fond of eating were unsuccessful. A similar case

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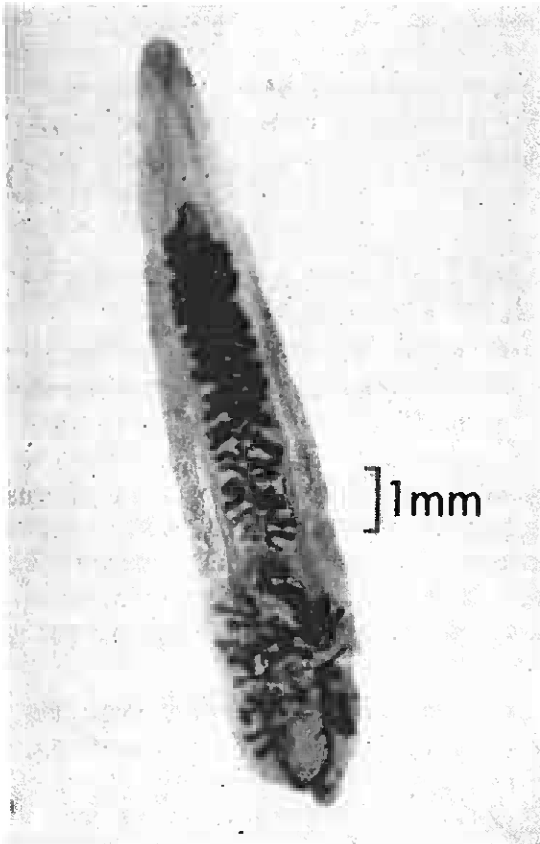


Fig. 2. Adult *Clonorchis sinensis* recovered from the bile duct at postmortem.

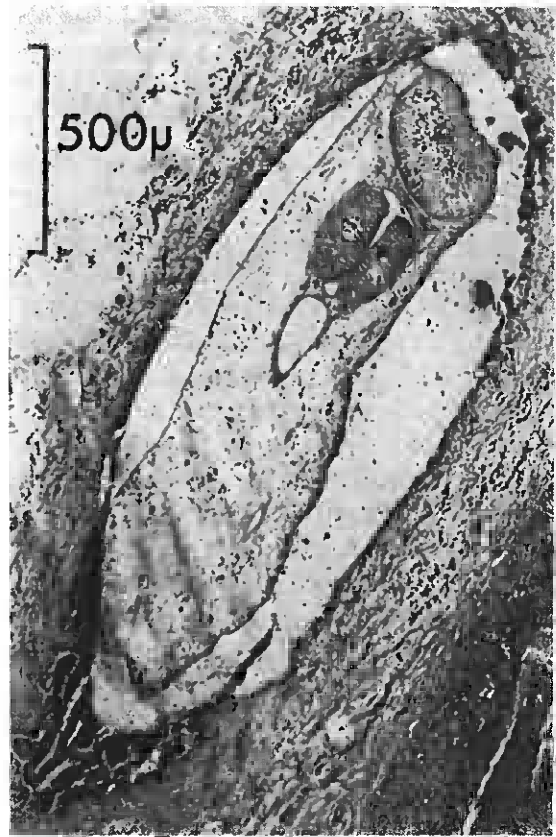


Fig. 3. An adult *Clonorchis sinensis* in a dilated bile duct. H & E.

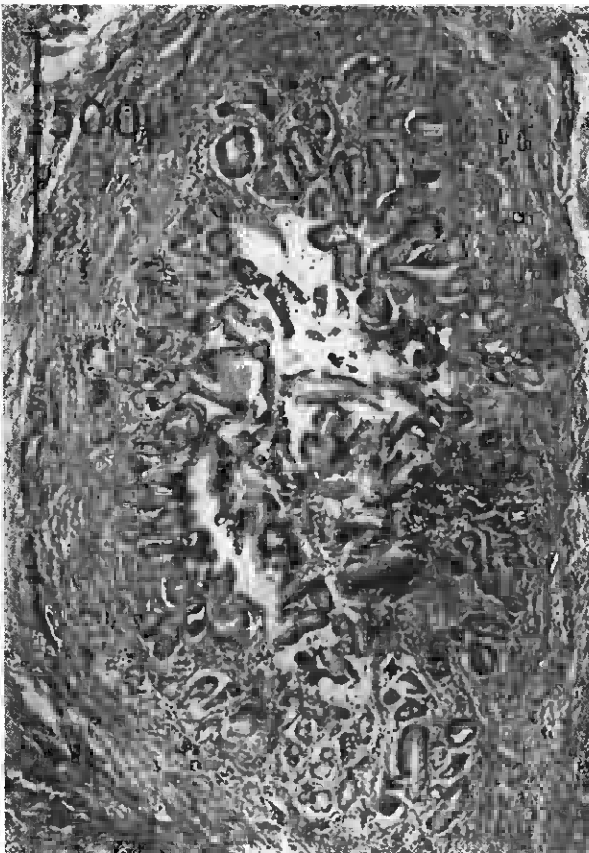


Fig. 4. Proliferation of bile ducts in a portal triad. H & E.



Fig. 5. Hyperplastic bile ducts. H & E.

of clonorchiasis in a man who had not been to any of the endemic countries was reported in Kuala Lumpur, Malaysia, by King (1968).

In the diagnosis of *Clonorchis sinensis* infection, the finding of adult flukes, in addition to the ova, is desirable, as *Clonorchis sinensis* ova closely resemble the ova of *Opisthorchis viverrini*, a related trematode, human infection of which has been described in West Malaysia (Bisseru and Lim, 1969).

Several drugs have been recommended for the treatment of clonorchiasis, but none appear to be completely satisfactory (Komiya, 1966). In our patient, chloroquine therapy does not appear very effective as excretion of ova increased in the course of treatment.

The pathological changes in clonorchiasis have been well described by Hou (1955). Hou and Pang (1964) classified human clonorchiasis into 4 groups: Group I (parasitologically positive), Group II (parasitologically and histologically positive), Group III (parasitologically, macroscopically and histologically positive) and Group IV (macroscopically and histologically positive but parasitologically negative). On this classification our patient belongs to Group II—ova in faeces, *Clonorchis* in bile ducts and hyperplasia of the epithelial lining of the bile ducts.

SUMMARY

A 41-year-old Chinese man with *Clonorchis sinensis* infection is described. The treatment

and pathological features are reported. It is postulated that he might have acquired the infection locally by eating raw fresh-water carps or related fishes, the fry of which is imported from China. This postulation remains unproven and search for more similar cases and further parasitological and epidemiological studies are required.

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