

Hepatic Schistosomiasis

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A 65-year-old man with lung cancer developed multiple metastases. Autopsy proved squamous cell carcinoma of the lung with metastases to the kidney, multiple bones and chest wall. In addition, there were some calcified eggs embedded in the portal area of the liver (Fig. 1) and submucosa of the colon and appendix, diagnostic of schistosomiasis. Schistosomiasis is the most important helminthic disease in humans. Three species of schistosomes, *Schistosoma mansoni*, *S. haematobium* and *S. japonicum*, are responsible for disease. *S. mansoni* is found in much of tropical Africa, parts of southwest Asia, South America and the Caribbean islands. *S. haematobium* is endemic in large regions of tropical Africa and part of the Middle East. *S. japonicum* occurs in parts of Japan, China, the Philippines, southeast Asia, and India.

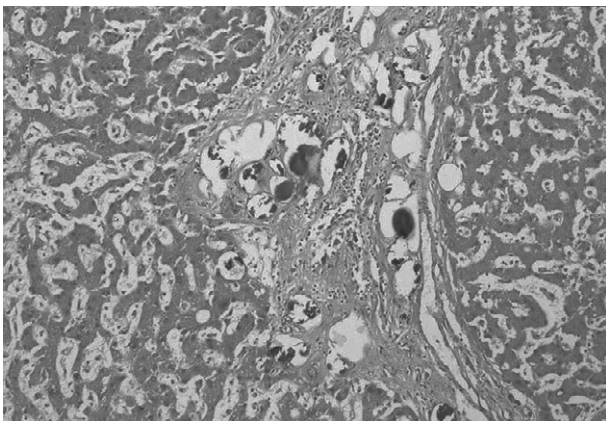


Fig. 1 — Histopathology shows some calcified schistosomiasis eggs embedded in the portal area of the liver (hematoxylin & eosin, 200×).

A schistosome egg hatches in fresh water, liberating a motile form (miracidium) that penetrates a snail, in which it develops to the final larval stage, the cercaria. The cercaria escapes from the snail into the water and then penetrates the skin of the human host. The organism matures in the intestinal venules of the portal drainage. Female *S. mansoni* and *S. japonicum* deposit immature eggs in the intestinal venules, whereas female *S. haematobium* lay eggs in the venules of the urinary bladder. The immunologic and inflammatory reactions to the schistosomal eggs in the tissue cause the manifestation of schistosomiasis. The basic lesion is a circumscribed granuloma or a cellular infiltrate of eosinophils and neutrophils around an egg. Liver disease caused by *S. mansoni* or *S. japonicum* begins as periportal granulomatous inflammation and progresses to dense periportal fibrosis (pipestem fibrosis). Severe cases of hepatic schistosomiasis lead to portal hypertension with splenomegaly, ascites and bleeding esophageal varices. Schistosomiasis is effectively treated with systemic antihelminthic agents. (*Tzu Chi Med J* 2010; 22(2):123)

References

1. Martin-Blondel G, Camara B, Selves J, et al. Etiology and outcome of liver granulomatosis: a retrospective study of 21 cases. *Rev Med Interne* 2010;31:97–106. (In French)
2. Burke ML, Jones MK, Gobert GN, Li YS, Ellis MK, McManus DP. Immunopathogenesis of human schistosomiasis. *Parasite Immunol* 2009;31:163–76.
3. Fung HS, Siu JC, Fan TW, Lai KC, Kwan TL. Hepatic schistosomiasis. *Hong Kong Med J* 2009;15:75–6.

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