

## RARE ASPECTS OF SCHISTOSOMA *mansoni* INFESTATION

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### Introduction:

Extensive subperitoneal miliary infiltration of the small intestine by *Schistosoma mansoni* and enlargement and heavy invasion of the mesenteric and retroperitoneal lymph nodes by ova of the same schistosoma are rare enough to warrant being recorded. The post-mortem findings of three cases are therefore given.

### Case Reports:

#### Case 1. "Miliary Schistosomiasis" of Subserous Surface of Small Intestine.

A man aged 35 years was admitted to hospital on September 14, 1949, with acute dysenteric symptoms. *Schistosoma mansoni* ova were found in his stools. He died five days later. On post-mortem examination the outer surface of the whole length of the small intestine was found to be studded with tiny nodules, which were macroscopically indistinguishable from miliary tubercles. Only a few such tubercle-like lesions were seen on the surface of the lowermost portion of the large bowel. The mesenteric and retroperitoneal lymph nodes were moderately but universally enlarged. Some were haemorrhagic. The outer surface of most of the large bowel as well as the parietal peritoneum were devoid of nodules; The inner lining of the small intestine was congested and showed some minute submucous haemorrhages, but no ulceration or overgrowth. Ulcers and polypoid growths were, however, seen on the mucous surface of the whole length of the large bowel.

The liver was cirrhotic. Scrapings from the miliary nodules on the surface of the small intestine revealed large numbers of ova of *Schistosoma mansoni*, while digested sections (with sodium hydroxide) of the mesenteric and retroperitoneal lymph nodes were simply clumps of such ova. They were negative for tuberculosis.

#### Case 2. Heavy Adult Infection; Enlargement and Heavy Invasion of Mesenteric and Retroperitoneal Lymph Nodes by parasitic Ova.

A man aged 30 years was admitted on September 11, 1949, with acute watery diarrhoea. On admission he was extremely toxic, dehydrated, and anaemic. Stools were positive for *Schistosoma mansoni* ova. He died ten days later. At necropsy a

very heavy adult infection of the portal vein and of its intra-hepatic tributaries was found. Most were present in the portal vein. The cut surface of the liver, which was soft and dark red, showed many adult worms as well as ova. The mesenteric and retroperitoneal lymph glands were all enlarged and were teeming with ova. The transverse and descending colon showed extensive sub-mucous polypoid growths and ulcers.

### **Case 3. Minimal Intestinal Lesions; Enlargement of Mesenteric Lymph Nodes.**

A man aged 40 years was admitted on August 8, 1949, for fever. He had no intestinal symptoms or signs on admission. Blood culture was positive for *Salmonella paratyphi A*. Stool examination was negative for *Schistosoma mansoni* ova. He went downhill and became more and more toxic and anaemic. A terminal diarrhoea developed and he died on September 26. On post-mortem examination the mesenteric lymph nodes were slightly enlarged. Sections showed the presence of many *Schistosoma mansoni* ova. The mucous membrane of the small intestine was slightly congested, while that of the large bowel was a trifle thickened. There were no overgrowths or ulcers. The liver was slightly enlarged but otherwise normal.

#### **Comments:**

The points of interest in these cases are:

Case 1: the miliary lesions, their simulation of miliary tuberculosis, and the heavy infection of the mesenteric and retroperitoneal lymph nodes.

Case 2: the heavy adult infection of the portal system and enlargement of the lymph nodes.

Case 3: the paucity of intestinal lesions while the lymph node infection was the predominant feature.

Subserous miliary schistosomal infiltration of the small intestine is an abnormal feature in *Schistosoma mansoni* infection, which could easily have been mistaken for miliary tuberculosis, while enlargement of the mesenteric and retroperitoneal lymph nodes is rare. Small-intestinal and lymph node lesions are, however, the usual findings in Asiatic schistosomiasis. The most interesting feature of these cases is therefore that their pathology resembles in some respects that of *Schistosoma japonicum* infection.

In *Schistosoma mansoni* infection the organs and tissues most seriously involved are the colon and rectum, though eggs carried in the mesenteric current into the portal vessels may filter out in the liver and lead to cirrhosis. The essential difference in

*Schistosoma japonicum* infection is the location of the adult worms and the discharge of ova primarily in the mesenteric vessels draining the small intestine. Thus the organs and tissues most seriously involved are jejunum, ileum, appendix, and mesentery. But the relatively short distance for transportation of eggs in the mesenteric current into the intrahepatic portion of the portal vessels and the large numbers of eggs discharged by *Schistosoma japonicum* females combine to set up periportal fibrosis and other visceral lesions, e.g. lymph nodes infiltration, as more important in this disease than intestinal lesions.

It is stated that the same schistosome may present different pathological features in different parts of the world. It may therefore be that lymph-node involvement is not an uncommon feature in Sudanese schistosoma *mansoni* infection. Many post-mortem examinations are required to prove this.

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