

Schistosoma

Schistosoma is a parasitic trematode (flake), which leads to devastating disease. Snails are the host to this parasite, and human illness develops when cercariae penetrate the skin. Disease manifests as gastrointestinal, liver and spleen granulomas. Infection is diagnosed with ELISA, and is treated with praziquantel.



PLAY PICMONIC

Pathophysiology

Trematode (Fluke)

Tree-toad

Schistosoma is a trematode, or blood-fluke. This is a parasitic flatworm.

Snail-infested Water

Snail-infested Water

Snails are the host for this parasite, and humans can develop infection from being exposed to snail-infested waters.

Intense Immune Response

Intense Moon

The symptoms of schistosomiasis occur after an intense immune response from the body to this parasite. Immune reaction to worms and trapped eggs lead to cellular infiltrant, leading to granulomas, inflammation and fibrosis.

Intestinal Disease

Diseased Intestines

As eggs pass through the digestive system, many pathologic events can take place. Ulceration can occur, eggs can become lodged in the intestines, and worms can become trapped in intestinal mesenteric veins.

Hepatosplenic Granuloma

Liver and Spleen Granny-llama

Typically, these parasites migrate to the liver sinusoids, where they feed on red blood cells. From this liver migration, hepatosplenic blood flow can become interrupted (through obstruction via worm or egg), leading to hepatosplenic dysfunction and granuloma formation. Schistosoma mansoni and japonicum are specifically known for leading to hepatic granuloma formation.

Squamous Cell Cancer of the Bladder

Square-mouse and Tumor-guy pulling on Bladder

Some types of schistosoma can migrate to ureteral areas or to the bladder and kidneys. These can lead to urinary granulomas and genitourinary issues in patients. Most importantly, Schistosoma hematobium can lead to squamous cell carcinoma of the bladder in those who are chronically infected. Patients display painless hematuria.

Diagnosis

Parasitic Antigens via ELISA

[Parasite Ant-igens with Elizabeth](#)

The most common diagnostic technique involves detection of parasitic antigens by ELISA, where the patient's blood is sampled.

Treatment

Praziquantel

[Pretzel-queen](#)

Praziquantel, a powerful antihelminthic medication is effective against flukes, like schistosomiasis.