Clonorchis Sinensis

Clonorchis sinensis is parasitic helminth which leads to biliary tract inflammation, pigmented gallstones, and sometimes cholangiocarcinoma in patients. It is a trematode, or liver fluke, which can be treated with praziquantel.

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Pathophysiology

Trematode (Fluke)
Tree-toad
Clonorchis sinensis is a trematode, or fluke, which is a parasite that affects human livers and gallbladders.

Undercooked Fish
Raw Fish
People contract clonorchis infection by eating undercooked fish. This happens because fish are an intermediate host for this parasite, and they burrow into fish muscle, and wait as cysts. At this point, they escape these cysts and infect humans when they consume the fish.

Biliary Tract Inflammation
Bill-duck In-flames
Once digested by the human host, these parasites burrow from the small intestine into the liver. From the liver, they feed on bile and travel to the bile duct. Clonorchis induces an inflammatory reaction from the body within the bile ducts and liver.

Pigmented Gallstones
Pigmented Gold-stones
Pigmented gallstones can occur from clonorchis infection. These stones are typically brown pigment, and consist of cholesterol and calcium soaps of fatty acids. These stones are seen in patients with mechanical obstruction of flow to the bile, like when clonorchis induces inflammation in the bile duct.

Associated with Cholangiocarcinoma
Cola-angel-car-gnome
Clonorchis sinensis is an oncogenic microbe, as it is associated with the development of cholangiocarcinoma.

Treatment

Praziquantel
Pretzel-queen
The preferred treatment for clonorchis sinensis is praziquantel, as it is an effective vermicide. Praziquantel causes the schistosomes to have an increased cell permeability to calcium. This calcium influx causes spasms, contractions and eventually muscle paralysis of the worms preventing attachment.

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