
Case report: Fasciola Hepatica worm swims in the gallbladder

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ABSTRACT

Human infestation with liver flukes is rare, as they are accidental host by ingestion of contaminated water & vegetables. To document the presence of this disease in Iraq/ Kurdistan region, we are reporting this case of Fasciola Hepatica infestation to a young lady with recurrent attacks of Rt. Abdominal pain. The worm was found, during cholecystectomy, swimming in the bile of gallbladder.

Key Words: Fasciola Hepatica, gallbladder

INTRODUCTION:

There has been an increase in *Fasciola hepatica* infections worldwide in the last decade and it is reported that 2.5 million people have been infected in 61 countries and more than 180 million people are at risk¹. As seen in the related literature, this disease is not only seen in developing countries but also in developed ones. For this reason it can be considered a world-wide problem. In nonendemic areas, it can be difficult for physicians to diagnose this disease as it is not often encountered². This is behind the delay in making the diagnosis some times. We report this case which was diagnosed intraoperatively as the 10th case discovered & treated in Sulaimanyia Teaching Hospital. These ten cases are collected & reported for the first time in IRAQ³.

CASE PRESENTATION :

28 y old female was admitted to our hospital complaining from recurrent attacks of Rt. Hypochondrial pain during the last 4 months. The pain associated with nausea, fever, and sometimes chills. She was newly married & travelled to a rural area where

they rear cattle. On examination, tender RT. Hypochondrial region, no hepatomegaly, and no other significant findings.

Abdominal ultrasound showed hypodense cystic lesion in the Rt. Lobe of liver of 32X 24 mm with adjacent smaller cystic lesion, the gallbladder was normal in size & wall thickness containing sludge & something, stone or worm. Biliary tree was normal in size. Blood investigations were all within the normal ranges. Differential diagnosis was calculus cholecystitis, hydatid disease. Abdominal Exploration through Rt. Subcostal incision & the hepatic cystic lesions deroofed & were containing bile coloured mud like material which was sent for histopathological study. Cholecystectomy done & in vitro the gall bladder explored where a living Fasciola worm was swimming in the bile (Figure 1 and 2). The case treated with triclabendazole 20 mg/kg single dose. She was discharged home in 3rd post operative day, doing well.

DISCUSSION:

Liver flukes Infestations of clinical importance include those by *Fasciola hepatica*. These parasites are trematodes and undergo both sexual (definitive host) and asexual (intermediate host) reproduction. j

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This condition exists all over the world but is commonly seen in Middle and Western Europe, South America and the Caribbean.

PATHOLOGY

It is known as the common sheep fluke and is found in sheep- and cattle-rearing countries. The parasite inhabits the gall bladder and bile ducts and passes ova in the stool of human & cattles. Ovae become embryonated in water and release miracidia, which invade a suitable snail as an intermediate host including many species of the genus *Lymnae*. In the snail the parasite undergoes several developmental stages (sporocysts, rediae, and cercariae). The cercariae are released from the snail and encysted as metacercariae on aquatic vegetations; humans can become infected after eating contaminated raw plants¹. After ingestion the metacercaria excyst in the duodenum and migrate through intestinal wall, the peritoneal cavity and the liver parenchyma into the biliary ducts, where they develop into adults, where they are sometimes confused as stones⁴ as what happened in our case. Larvae some times also travel to ectopic body sites like intestinal wall, brain, skin and eyes⁵. In humans maturation from metacercariae into adult flukes takes approximately 3-4 months⁵. The adult flukes (*Fasciola hepatica*: up to 30 mm by 13 mm; *Fasciola gigantica* up to 75mm) reside in the large biliary duct in mammalian host⁵. The disease is not only acquired by eating watercress but also by raw or undercooked liver of infected animals, or other plants such as lettuce and spinach, or drinking infected water. For this reason, if the infected materials stated above are eaten, the disease will not be limited to rural areas, and can be seen in

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the centers of developed cities⁶.

Patients may be asymptomatic or present with acute or chronic symptoms. Acute symptoms or hepatic stage occur when the worm migrates through the liver parenchyma and can last for up to 3 months after

ingestion of metacercariae. Symptoms during this phase typically include fever, upper abdominal pain so as our case, eosinophilia and hepatomegaly. Ascites, hepatitis, subcapsular hemorrhage, hepatic necrosis, pulmonary infiltrate and effusion have also been described during this phase². Chronic symptoms or biliary stage begins when the flukes enter the biliary tree where they can remain asymptomatic for many years. The parasite itself can obstruct the duct mechanically, and it can lead to hyperplasia and hypertrophy in the duct epithelium by increasing the concentration of proline³. As a result periductal fibrosis and thickening of the duct walls may occur, causing obstruction. This can lead to intermittent biliary colic, cholecystitis, jaundice, pancreatitis and hemobilia, anaemia and hypoproteinaemia.

Lab. Investigations

like Full blood examination may show eosinophilia. Liver function tests show features consistent with cholestasis but our case results were within the normal ranges. Stools are examined for the presence of ova but we didn't do it because our case was accidentally diagnosed. Specific serological testing usually confirms the diagnosis.⁴

Imaging studies

have been used to aid in the diagnosis of fascioliasis; Ultrasonography (US) has variable sensitivity in detecting hepatic abnormalities & can be unremarkable. US may show parenchymal heterogeneity and / or multiple cystic lesions, biliary tree abnormality and can show echogenic nonshadowing particles inside the gallbladder (motile flukes. CT scan can be used also in detection of hepatic lesions. Endoscopic retrograde cholangiopancreatography (ERCP) frequently demonstrate the liver fluke in the gallbladder; dilated bile ducts with small radiolucent linear or crescent shadows suggest the presence of the parasite². In our case there was a hepatic cystic lesion and motile particle inside the

gallbladder but we were not sure that it is a case of fascioliasis.



Figure 1: A living Fasciola worm



Figure 2: A living Fasciola worm

TREATMENT:

Triclabendazole is the drug of choice for the treatment of both acute and chronic fascioliasis it is used routinely in veterinary practice for the treatment of fascioliasis; the recommended dose is 10 mg/kg body weight as a single dose administered with food. For sever cases two doses of 10 mg/kg is administered 12-24 hr. apart. Bithionol is alternative drug, adult and child dose is 30-50mg/kg (max 2g/day is divided on alternative day) for 10-15 treatment days². Both drugs may disturb the GIT as side effects like nausea, vomiting, abdominal pain, dizziness, sweating.² Unfortunately, triclabendazole is not commercially available in our country but we managed to treat our case with it successfully. Surgical intervention like cholecystectomy & biliary procedures is preserved for symptomatic patients of cholelithiasis, perforation of the biliary system, or bleeding complications, patients with ascending cholangitis may require surgery or ERCP and sphincterotomy.² Prognosis is excellent with adequate treatment & all clinical symptoms and laboratory findings must return to normal gradually.²

CONCLUSION :

Fascioliasis is increasing all over the world. The physicians should have high index of suspicion in order not to miss such cases. We should put Fascioliasis in the differential diagnosis of upper abdominal pain and try to diagnose it preoperatively by at least doing eosinophilic count. We should educate the population about this disease and how it infest human & try to eliminate sources of infection like contaminated water & watercress, eradicate snails, treating the infected cattles. This disease is emerging for the first time in our locality and it will be endemic like hydatid disease if we did not pay attention to it.

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