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CASE REPORT

OBSTRUCTIVE JAUNDICE DUE TO A *FASCIOLA HEPATICA* WORM IN AN ETHIOPIAN PATIENT

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ABSTRACT

A 30yearold lady presented to the University of Gondar Hospital with intermittent jaundice & RUQ abdominal pain of one year duration. Physical findings were deep icterus and mild RUQ tenderness. Investigations suggested obstructive jaundice. Intraoperatively, the cause of biliary obstruction was found to be a Fasciola hepatica worm.
Obstructive jaundice is a very rare manifestation of human fascioliasis and its occurrence in this report may indicate a significant prevalence of the disease in our population.

Key Words *Obstructive jaundice, Fasciola hepatica, Human fascioliasis*.

INTRODUCTION

Human fascioliasis, a disease considered rare previously, has increased in incidence significantly in the last three decades in many parts of the world. The total estimated number of people infected is 2.4 million in more than 60 countries, and the number at risk is 180 million worldwide (1,2). In Ethiopia, although animal studies have been done to evaluate the prevalence & seasonal incidence of the infection, the human prevalence remains unknown (3,4,5).

The disease is caused by infection with trematode flat worms *Fasciola hepatica* or *Fasciola gigantica*. *F.hepatica* is more common and has a worldwide distribution. The adult worm is a large, flat, brown & leaf shaped, measuring 2.5 -3cm by 1-1.5cm. Although sheep, goats and cattle are the primary host of the disease, humans may be infected accidentally by eating vegetables contaminated by the metacercariae of the worms and occasionally by drinking unboiled contaminated water containing viable metacercaria (6,7,8).

The ingested metacercariae excyst in the duodenum and the larvae emerge, and penetrate the small intestinal wall into the peritoneal cavity and the liver capsule to pass through the liver tissue into the biliary tract. They grow into mature worms within the bile ducts. It takes about 12 weeks for the worms to start producing eggs making the diagnosis difficult in the first three to four months (7,8).

The clinical manifestation of the disease is mainly divided into the acute (liver) phase and the chronic (biliary) phase (9,10,11).The biliary phase being usually asymptomatic, obstructive jaundice is a very rare manifestation of the disease. In a review of medical publications from 1990 – 2000 GC, only 19 cases of common bile duct obstruction due to the *Fasciola hepatica* were reported (12,13,14).This case report is also the first in Ethiopia to the best knowledge of the author.

CASE REPORT

A 30-year old lady presented to the University of Gonder Hospital complaining of yellowish discoloration of the eyes of one year duration. The jaundice was intermittent and associated with colicky right upper quadrant abdominal pain and pruritus. She had neither fever, weight loss, vomiting nor diarrhea. She was from a small river side village in Belessa woreda, north east Gondar. On examination, she ap-

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peared slightly malnourished and deeply icteric. She had normal vital signs and pink conjunctiva. Chest and cardiac examinations were normal with no palpable lymph nodes. Abdominal examination was unremarkable except for a mild right upper quadrant tenderness. The laboratory results of the patient are shown in Table -1

Table-1 - Laboratory results

WBC count	**8600/mm3(58%N,36% L;6%E)**
Total serum bilirubin	12 mg /dl
Direct bilirubin	7.5 mg /dl
SGOT	61 U/L (N = 0 – 46U/L)
SGPT	79 U/L (N = 0 – 46U/L)
Alkaline phosphatase	1022U/L (N=60-306U/L)
Urinary Bilirubin	+++
Urinary urobilinogen	Negative

Abdominal sonography demonstrated a dilated biliary tree with the common bile duct diameter of 15 mm. GB, liver and pancreas were normal with no cause for identiable biliary obstruction.

With the diagnosis of obstructive jaundice the cause of which was unknown, the patient was prepared and operated on.

Intra-operatively**,** the liver and pancreas were normal. The gall bladder was distended with bile but had normal wall thickness and no stones. The common bile duct was dilated with a diameter of ~1.5cm. No stone or mass could be palpated along its course. Cholecystectomy was performed, and CBD exploration revealed a live *fasciola* worm measuring ~ 2.5 X 1.5 cm. The worm was extracted and sent to the Parasitological Laboratory of the University of Gondar Hospital that confirmed it was an adult *Fasciola hepatica* worm (Fig-I). Further exploration of the CBD was normal. The patient had a smooth recovery and was discharged after treatment with a dose of Praziquantel. One month after her surgery, she had no complaints because the jaundice had disappeared. All lab tests, including stool examination, were negative except a peripheral eosinophilia of 3%. She was then given a repeat dose of Praziquantel and appointed for follow up. Subsequent follow-ups at 3, 6, and 12 months revealed no clinical, laboratory, or ultrasound abnormality.

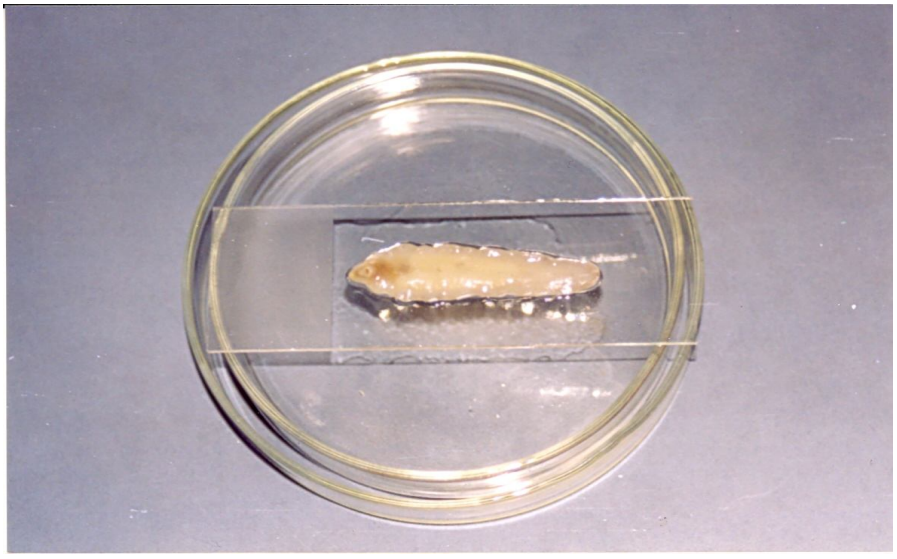

Figure 1*- The Fasciola heptica worm extracted from the common bile duct.*

DISCUSSION

In Ethiopia, fascioliasis is known to be mainly an animal disease causing a great economic burden in parts of the country (3,4,5). Though few, there have been reports of human fascioliasis in Ethiopia, one of which was from Gonder town, but the prevalence of the disease has never been determined in the population(15).

Studies done in the Nile Delta in Egypt have reported rates of as high as 12.8% of human fascioliasis(16). Considering the high incidence of fascioliasis in cattle and sheep in parts of Ethiopia, it would be reasonable to assume a significant human infection in these areas.

The clinical manifestation of the disease is mainly divided into an acute hepatic phase manifested by an upper abdominal pain, anorexia, malaise, fever and pruritus, hepatomegaly and pallor being the most common physical findings(9,10,11). The biliary phase is usually asymptomatic and has rarely been reported in medical literature as causing extrahepatic biliary obstruction which results in obstructive jaundice, as was the case with our patient (12,13,14).

The finding that there is a rare manifestation of the disease in this report, may indicate a significant prevalence of human fasciloiasis in the population.

The laboratory diagnosis of the disease has limitations due to delayed and intermittent egg production of the parasite. The serologic tests are very sensitive but may have problems of cross reaction with schistosoma infection (7,8).

The liver function test results and sonography report of our patient was fairly similar to those of previously reported cases, suggesting biliary obstruction with mild to moderate biliary tree dilatation (12, 17,18). Although, peripheral eosinophilia is a very common finding in the acute stage of the disease, it may be absent in the chronic biliary phase (9,10,11,15). Our patient had peripheral eosinophilia at presentation, a finding which has also been noted in other previous reports (12).The diagnosis of fasciola worm as the cause of the biliary obstruction had only been made after recovering the adult fasciola worm from the biliary tree intraoperatively or after ERCP and endoscopic sphincterotomy in most of the previous reports demonstrating the diagnostic difficulty faced in our patient (12,17,18).

The surgical management to relieve the biliary obstruction was followed by treatment with Praziquantel in our patient. Although Triclabendazole is the preferred choice of treatment, it was not available for use for our patient, so the less effective drug- Praziquantel had to be used. Praziquantel, although considered to be poorly effective against *Fasciola hepatica* , has been successfully used to treat human fascioliasis in some previous reports(18).

CONCLUSION

Obstructive jaundice is a very rare manifestation of human fascioliasis, and such a finding may indicate a significant prevalence of the disease in the population.

The diagnosis of the disease should be considered in patients with upper abdominal pain, hepatomegaly and pruritus. It should also be included in the differential diagnosis of patients with obstructive jaundice and peripheral eosinophilia as was the case with our patient.

The author also recommends that further epidemiologic surveys be considered to determine the exact prevalence of human fascioliasis in parts of Ethiopia.

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