

CASE REPORT

BILIARY *FASCIOLA GIGANTICA* CASE REPORT FROM TURKEY

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Abstract. We present a case of *Fasciola gigantica*-induced biliary obstruction and cholestasis diagnosed and treated via endoscopy and trichlorobendazole treatment. This is the first case of *Fasciola gigantica* treated via endoscopic biliary extraction during ERCP and drug treatment reported from Turkey.

Keywords: *Fasciola gigantica*, biliary obstruction, cholestasis, Turkey

INTRODUCTION

Fascioliasis is caused by trematodes belonging to the genus *Fasciola* (*F. hepatica* and *F. gigantica*). It's infestation is known to cause bile duct inflammation and biliary obstruction. Fascioliasis is a zoonosis, a disease of animals that can be transmitted to humans.

Fascioliasis can be distinguished by an acute and a chronic phase. The acute phase is characterized by the migration of immature worms through the liver. Symptoms are related to hemorrhage and inflammation and are usually severe, including fever, abdominal pain, respiratory disturbances and skin rashes. The chronic phase starts when the worms reach the bile ducts; symptoms are nonspecific and usually mild to moderate.

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CASE REPORT

In January 2010, a 37-year-old woman, presented with icterus, ascites and pain in her right-upper abdomen. She was living in a village in southeastern Anatolia. She raised sheep and cows. She had a history of consuming lettuce, mallow, dill and parsley without washing. Her past medical history was normal; she had no drug use. On admission to our department, her temperature was 37.9°C; she had icterus, splenomegaly, hepatomegaly and ascites. Over a 3-month period, her weight had dropped from 70 kg to 58 kg. Her laboratory results revealed leukocytosis (15,000/ l) and elevated AST, ALT and bilirubin levels. A computed tomography (CT) scan showed a reticular pattern in all segments of the liver with a 6 cm lobulated mass on multiple views with some cystic areas. After contrast injection mild peripheral enhancement of the lesions was seen (abscess-phlegmon was considered). She had yellow ascitis fluid. Her eosinophil count was about 26.4%.



Fig 1—ERCP findings of patient, footprints of parasite.



Fig 2—ERCP findings of patient, footprints of parasite.

Her IgE level was 1,170 IU/ml (N: 0-350 IU/ml). Her serum titer was 1:20,480 by enzyme-linked immunosorbent assay (reference: <1:160). Her serum ascites albumin gradient (SAAG) was <1.1. We performed an ERCP and removed 7 live *F. gigantica* parasites (Figs 1 and 2). On the basis of its shape, the fluke was diagnosed as *Fasciola gigantica*. A portion was kept in

70% ethanol (Fig 3). The eggs of *F. gigantica* are seen Fig 4a and 4b. A single dose of trichlorobendazole (3 tablets orally) was administered. After the worms were removed the clinical symptoms disappeared and the patient remains completely healthy.

DISCUSSION

Fasciola gigantica is a parasitic flatworm of the class Trematoda, which causes tropical fascioliasis. It is regarded as one of the most important single platyhelminth infections of ruminants in Asia and Africa. Estimates of infection rates are as high as 80-100% in some countries. Infection with *Fasciola* spp occurs when metacercariae are accidentally ingested with raw vegetation (Dias *et al*, 1996; Haseeb *et al*, 2002; Mas-Coma *et al*, 2005; Soliman, 2008). The metacercariae exist in the small intestine, and move through the intestinal wall and peritoneal cavity to the liver where adults mature in the biliary tracts of the liver (Rana *et al*, 2007). Eggs pass through the bile ducts into the intestine where they then pass out in the feces. Despite the importance of differentiating between the different fasciolid species, due to their distinct epidemiological, pathological and control characteristics, there are no coprological or immunological tests for diagnosis. Differentiation can only be made by either a morphological study of the adult fluke or by molecular tools (Anuracpreeda *et al*, 2009; Chunchob *et al*, 2010). On cholangiograms, biliary fascioliasis is characterized by nonspecific biliary



Fig 3—*Fasciola gigantica*.

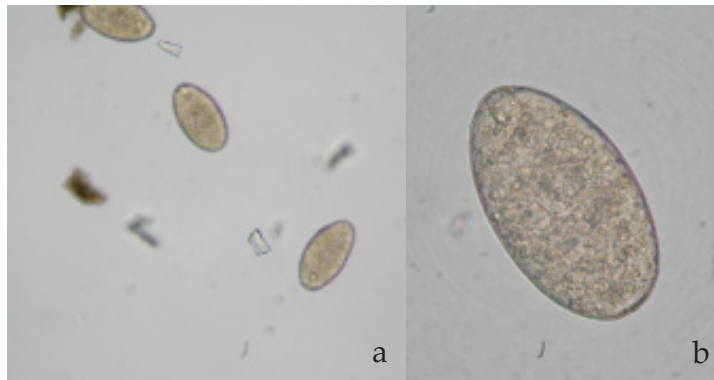


Fig 4—*Fasciola gigantica*, eggs.

dilatation and single or multiple small filling defects, which represent the flukes themselves (Schwacha *et al*, 1996; Kanoksil *et al*, 2006; Khandelwal *et al*, 2008). A conclusive diagnosis of biliary fascioliasis can be made by the direct identification of fluke(s) obtained from endoscopic or surgical removal, or detection of eggs in the bile or stool.

Symptoms of the hepatic phase, which begin about 1 month after exposure to metacercariae, are fever, general malaise, fatigue, hepatomegaly, anorexia, weight loss, urticaria with dermatographism and peripheral blood eosinophilia. Symptoms may be absent in cases of light infection. The biliary phase may be asymptomatic or there may be symptoms related to cholangitis and obstruction of the biliary tract due to the enlarging fluke(s). The biliary phase may last for months or years. Peripheral blood eosinophilia during this interval suggests hepatobiliary fascioliasis (Dias *et al*, 1996).

Parasite removal by endoscopic retrograde cholangiopancreatography is one therapeutic option in patients with acute obstructive cholangitis due to *F. gigantica*. Triclabendazole 10 mg/kg body weight as a single dose is the treatment of choice for fascioliasis. The drug is active against both immature and adult parasites, with high cure

rates. Our case had both a chronic and hepato-biliary phase of fascioliasis. The ERCP findings of the parasite are interesting (foodprints of the parasite) (Figs 1 and 2). We believe this appearance is specific for fascioliasis. This *Fasciola gigantica* case is the first case report treated via endoscopic biliary extraction with ERCP and drugs in Turkey.

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