

Fasciolopsis buski Diagnosed by Upper Gastrointestinal Endoscopy



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A 36-year-old male patient from rural South Bengal, India, presented to our hepatology outpatient department (OPD) with upper abdominal discomfort, anorexia, indigestion, and chronic diarrhea with passage of loose stools 3–4 times per day for 6 weeks. He was afebrile without any weight loss. He did not give any history of skin changes, arthralgia, or oral ulceration. He gave a history of consumption of water chestnuts. He had no history of travel or intake of alcohol or any medications. Physical examination did not reveal any lymphadenopathy, thyroid mass, organomegaly, or abdominal mass. Blood reports showed anemia with a hemoglobin of 78 gm/L (normal range 130–170 gm/L), and total leukocyte count showed eosinophilia (12%). Liver function test showed mild hypoalbuminemia. Human immunodeficiency virus, hepatitis B virus surface antigen, and antihepatitis C virus antibody were nonreactive. Abdominal ultrasonography was normal. Initial stool examination was normal. On upper gastrointestinal (GI) endoscopy, multiple flat, leaf-like, fleshy structures attached to duodenum were found, which were extracted endoscopically (Fig. 1 and Supplementary Video S1). They were morphologically identical to adult form of *Fasciolopsis buski*

(3.5 cm × 1.5 cm × 0.5 cm) (Figs 2 and 3). He was treated with tablet praziquantel (75 mg/kg, in three divided doses for 1 day). The next day, stool examination showed eggs of *F. buski* (morphologically, eggs of *F. buski*, *Fasciola hepatica*, and *Fasciola gigantica* are similar) (Fig. 4). A few adult worms of *F. buski* were also expelled

through feces for 2 days. From the 3rd day onward, stool examination did not show any eggs or adult forms of *F. buski*, and he was asymptomatic for a 6-month follow-up period.

Fasciolopsis buski is the largest human small intestinal fluke (trematode). It is endemic in Southeast Asian countries, including India. In India, very few cases were reported from Bihar, Uttar Pradesh, and other northeastern states.^{1–4} Risk factors are consumption of improperly cooked or raw aquatic plants (particularly water chestnuts, watercress, or bamboo shoots) where metacercaria, the infective stage of the fluke, attach. Infection is usually asymptomatic. Symptoms are due to heavy infection that causes inflammation, ulceration, and microabscesses of the intestinal mucosa where flukes attach. Symptoms are anorexia, nausea, vomiting, diarrhea, abdominal pain, dyspepsia, malabsorption, and weight loss. Fatal heavy infection causes extensive intestinal inflammation, ulceration, perforation, small bowel stricture, abscess formation, and hemorrhage.⁵ It is diagnosed by identification of characteristic bile-stained egg with an operculum at one end in the stool. Sometimes eggs and adult worms are recovered from stool after anthelmintic therapy.⁵ Peripheral blood eosinophilia may be present. It can also be diagnosed by upper GI endoscopy, and direct removal of the adult worms during endoscopy may be possible. It is treated by tablet praziquantel, 75 mg/kg, in three divided doses for 1 day.

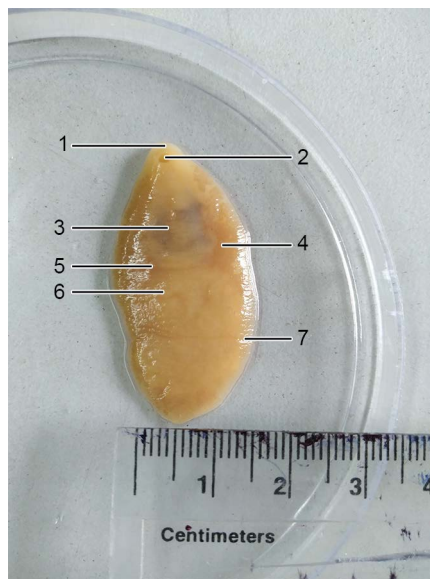


Fig. 2: Adult worms of *F. buski*: (1) Oral sucker; (2) Ventral sucker; (3) Unbranched intestinal caeca; (4) Uterus; (5) Ovary; (6) Testis; (7) Vitellaria

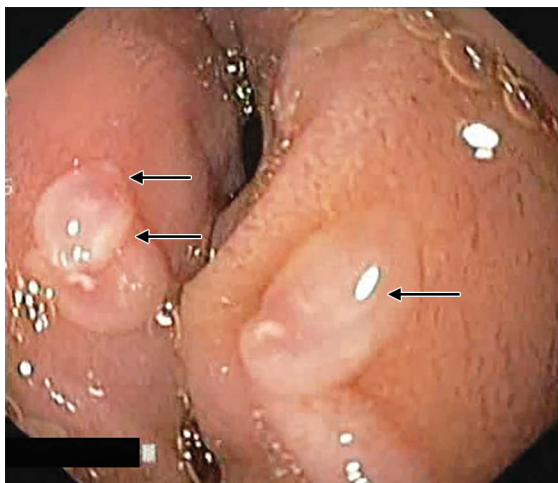


Fig. 1: Endoscopic view of duodenum showing adult worms of *F. buski* attached to mucosa. Black arrows

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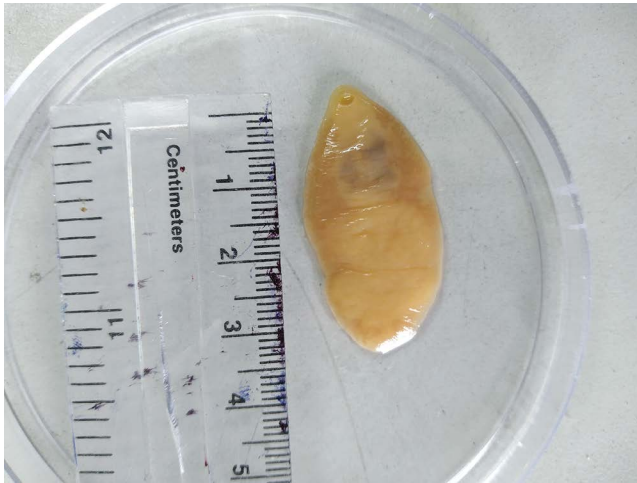


Fig. 3: Adult worms of *F. buski*

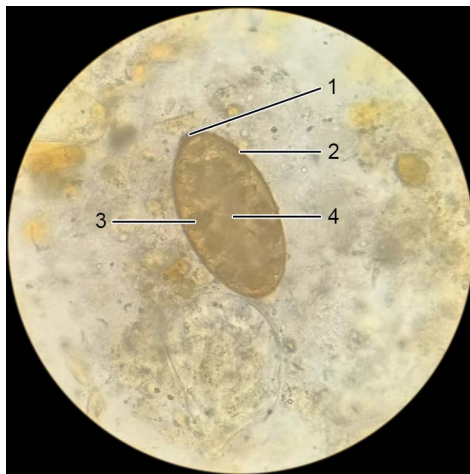


Fig. 4: Egg of *F. buski*—bile-stained, operculated, in wet mount preparation of stool in high-power field ($\times 40$ magnification): (1) Operculum; (2) Eggshell; (3) Yolk cell; (4) Ova

High index of suspicion is required to diagnose *F. buski* in a patient who consumes raw or improperly cooked freshwater plants

and who presents with chronic diarrhea, features of malabsorption, and peripheral blood eosinophilia. If there is high suspicion but eggs of

fluke cannot be recovered from the stool, then upper GI endoscopy should be done.

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CONFLICT OF INTEREST

There is no actual or potential conflict of interest to disclose.

SUPPLEMENTARY MATERIAL

Supplementary Video S1 is available online at the journal website.

Video S1: Endoscopic view of duodenum showing adult worms of *F. buski* attached to mucosa and endoscopic extraction of the adult worms

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