

Case Report

Fasciolopsis buski Infection in a 50-Year-Old Female

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Abstract

Fasciolopsiasis is a disease caused by the largest food-borne intestinal trematode known as Fasciolopsis buski. Here we report a case of a 50-year-old female who presented with upper abdominal pain and vomiting for one month. She was previously diagnosed as a case of choledocholithiasis. Endoscopic retrograde cholangio-pancreatography (ERCP) revealed stones along with two leaf-shaped worms which were removed from the duodenum of the patient. The worms were identified as F. buski by its unique morphology. Awareness regarding this parasitic infestation, especially in the rural area, should gain attention while formulating strategies to prevent and manage such infestation.

Key words: *Fasciolopsis buski; ERCP; Trematode*

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Introduction

Fasciolopsiasis is a disease caused by the largest intestinal fluke, *Fasciolopsis buski*.¹ Food-borne trematode (Fluke) infections are emerging as a major public health problem worldwide. More than 40 million people are affected and over 750 million (>10% of the world's population) are at risk of infection. The major concentrations are in Southeast Asia and Western Pacific Regions.² Prevalence of infection in children are 57% in China, 25% in Taiwan, 50% in Bangladesh, 60% in India and 10% in Thailand.^{3,4} Fasciolopsiasis is aggravated by social and economic factors such as poverty, malnutrition, an explosively growing free-food market, lack of sufficient food inspection and sanitation.^{4,5} Mild infection of *Fasciolopsis buski* may remain asymptomatic.⁶ Among the clinical features, abdominal pain, diarrhea, mucosal ulceration, intestinal obstruction, anasarca and even fatality are described following heavy infestation.^{7,8}

Case report

A 50-year-old female hailing from Tangail was admitted in the department of Surgery, Enam Medical College & Hospital with the complaints of pain in upper abdomen and vomiting for one month. She was previously diagnosed as a case of choledocholithiasis. During admission her vital parameters were normal and no abnormalities were detected in heart and lungs. Her abdomen was soft, but tender in right hypochondriac region.

After necessary investigations and preparation, ERCP was done for the treatment of choledocholithiasis. In addition to removal of stones, two leaf-shaped, flesh-colored, measuring 2.5 cm × 1.3 cm and 2.2 cm × 1.3 cm worms were removed from the duodenum. The incidental finding of worms gained attention of the concerned physician and specimen of worms were preserved and sent to the department of Microbiology for further examination.

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The features of worms were consistent with *Fasciolopsis buski* (Fig 1). Lifestyle and dietary history of the patient revealed ingestion of raw vegetables and water chestnuts which supported the cause of this infestation.



Fig 1. Adult worm of *Fasciolopsis buski*

Discussion

Fasciolopsis buski is the largest human intestinal trematode, prevalent in Southeast Asia including Bangladesh. These are restricted to areas where water plants such as water chestnut, water caltrops, water bamboo etc are cultivated and in communities that consume these water plants uncooked. The source of infection is ingestion of encysted metacercariae on fresh water plants.^{5,9}

Aquatic snails act as intermediate host for the parasite and harbor the infective metacercariae that encyst on water plants after being released into the water. The mature fluke develops and starts laying eggs within three to four months after infective metacercariae have been ingested.⁴ Two species of the snails, *Segmentina hemisphaerula* and *Segmentina trochoides*, have been found to play an important role in disease transmission. Although both pigs and humans act as definitive hosts, the former appear to be the only reservoir of infection.¹⁰ In severe cases, patients may present with abdominal pain, chronic diarrhea, anemia or systemic allergic reaction. The diagnosis of *F. buski* infestation is usually supported by the presence of ova in stool.⁹

Though the present distribution of parasitic diseases reflects the success of hygiene and control measures

in the more developed parts of the world, in developing countries like ours it becomes extremely pertinent to stress the need to disseminate health education at the community level focused on the importance of properly cleaning and processing vegetables, discouraging the use of night soil as fertilizer etc. Such measures could go a long way in preventing and controlling a battery of infectious diseases including Fasciolopsiasis. Furthermore, the importance of continuing medical education to medical personnel in areas of emerging and re-emerging problems in tropical countries to sensitize them to current issues of public health cannot be overemphasized.

The prevalence of intestinal fluke infestation in our country may be higher than it is being expected as per the sociodemographic factors contributing to the infection of *Fasciolopsis buski*. This finding opens an area of further research to determine the burden of intestinal flukes which may cause fatal complications, if remain undiagnosed or unfortunately diagnosed at later stage.

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