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RESEARCH ARTICLE

FASCILOPSIASIS: A RARE CASE REPORT FROM A TERTIARY CARE HOSPITAL IN SOUTH ODISHA, INDIA

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ABSTRACT

Fasciolopsiasis is a disease caused by largest intestinal fluke, Fasciolopsis buski. Two species of intestinal flukes cause human infection in defined geographic areas worldwide. The large Fasciolopsis buski is endemic in Southeast Asia and is the most common human intestinal Trematode whereas the smaller heterophyes is found in the Nile Delta of Egypt. Human acquires the infection after eating raw freshwater plants contaminated with the infective Metacercariae. Most individuals infected with Fasciola buski infection are asymptomatic, however in heavy F. buski infection patient may have pain abdomen, diarrhea and malabsorption. We are reporting a rare case of Fasciola buski infection where a 35 year female, labourer, native of south odisha with a history of frequent drinking of water from Chilika lake (The largest brackish water lake in Asia) complained of pain abdomen, vomiting and diarrhea for 3 months, Physical examination showed pallor, icterus, edema with hepatosplenomegaly. Laboratory investigation showed she had iron deficiency anemia, hypoalbuminemia, Ultrasonography of abdomen showed multiple cysts in liver and kidney, CT scan abdomen showed multiple cysts in liver and kidney and stool examination showed both eggs and live adult worms which was identified as Fasciola buski on gross morphology. She was successfully treated with Praziquantel. Detection of both eggs of F. buski and adult worm in stool with presence of multiple cysts in liver and kidney with features of Malabsorption is extremely rare and raises the possibility of unidentified cases in that region.

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INTRODUCTION

Fasciolopsis buski, a duodenal digenetic trematode, of the Fasciolidae family, was described for the first time by Busk in the duodenum of a sailor in 1843 in London and its life cycle in humans was first described by Barlow in 1925 (Mahajan et al., 2010). The adult worm is found in the duodenum and jejunum of pig and man, where they lay unembryonated eggs, which are excreted out in the faeces and undergo further development in water. Human get infected by eating contaminated raw water plants, especially when peeling off the outer layers with their teeth. It explains the high prevalence of this disease among children and people living near water chestnut and water caltrop plantations (Rohela et al., 2005). After infected, most human remains asymptomatic. The clinical signs and symptoms of severe infection are abdominal pain, vomiting, diarrhea, low-grade fever, and generalized edema may be seen. Diagnosis is made by detecting eggs in stool or detecting adult worm in stool or vomitus (Mohanty et al., 2012). The worm cause damage to human body by three ways mechanical, obstructive and toxic. At the site of attachment in mucosal layer they produces ulcer. A large number of worms may hamper digestion and can cause obstruction.

Toxic metabolites cause edema of face, abdomen and lower extremities. There may be leukocytosis with eosinophilia upto 35% but leucopenia with lymphocytosis can also be seen (Hafeez, 2003).

CASE REPORT

A 35 year female, manual labourer with history of frequent drinking of water from Chilika lake (The largest brackish water lake in Asia) presented to the Medicine OPD with Pain abdomen for 3 months, Intermittent vomiting for 2 months and low grade fever & diarrhoea for 1 month. On examination she had pallor, icterus, pitting oedema, Systemic examination showed Hepatomegaly, Splenomegaly with bilateral enlarged kidneys. Laboratory investigation showed Hb-7.4 gm%, with peripheral smear showed microcytic hypochromic anemia, ESR-64 mm 1st hr, TLC-12400/cmm, TPC-2.8 lakhs/cmm, HbsAg- negative, HCV antibody-negative & seronegative for HIV, SGOT-110 IU/L, SGPT-116 IU/L, S. Alkaline phosphatase-330 IU/L, S. Bilirubin(Total)- 1.2 mg%, S. Albumin-3 gm%, Prothrombin time-3seconds prolonged, Urea-27 mg%, S. Creatinine- 1.5 mg%. Serum TB PCR & Interferon gamma release assays-negative. Imaging showed Ultrasonography of abdomen & pelvis showed multiple cystic lesions over liver and kidneys, CT scan Abdomen showing Multiple tiny cysts in B/L kidneys, largest one measuring 3 cm × 2.3 cm was seen in mid

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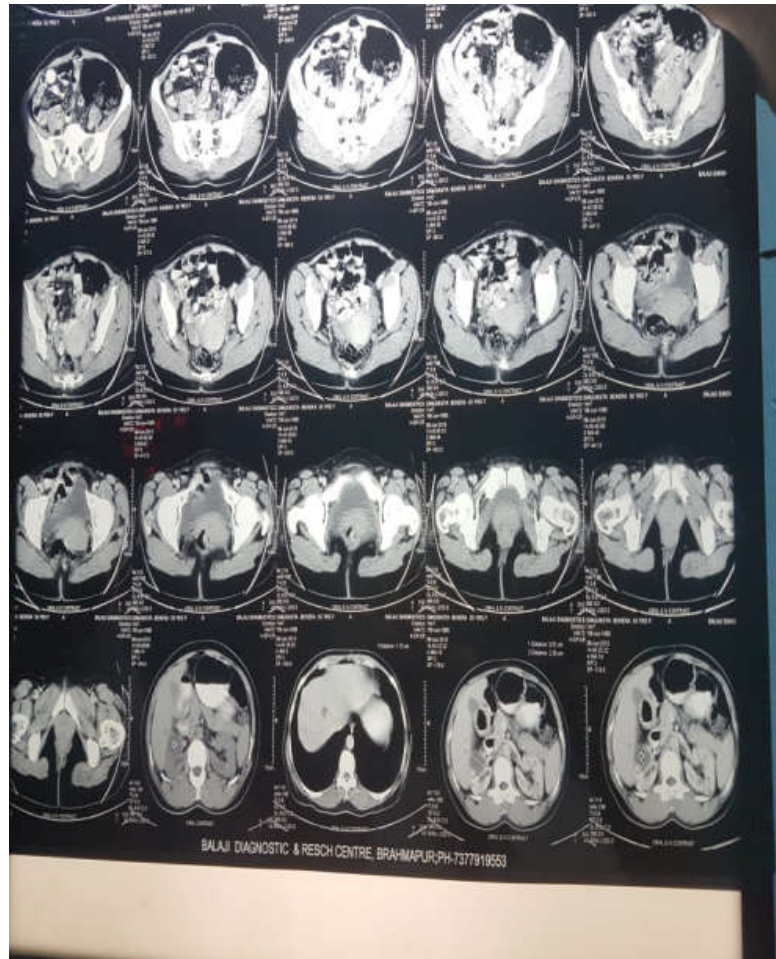


Figure 1. CT scan Abdomen showing multiple cysts in liver, kidneys



Figure 2 a. Adult *F buski* (Dorsal view)



Figure 2 b. Adult *F buski* (Ventral view)

cortical surface of right kidney, Multiple tiny cysts were seen diffusely in both lobes of liver, largest one measuring 1.7 cm at segment VII of right lobe of liver (Figure 1). During evaluation of her stool sample, stool showed multiple eggs with moving live parasites which were later confirmed to be *Fasciolopsis buski* (Figure 2 a & b). She was diagnosed as a case of fasciolopsiasis and was successfully treated with praziquantel and iron supplementation.

DISCUSSION

Reports of *F. buski* infestation in India have been mainly done from Bihar, Uttar Pradesh, and Maharashtra and sporadically from other states like Assam and West Bengal⁵.

Fasciolopsiasis seem to be restricted to areas where water vegetations such as water chestnut, watercaltrops, water bamboo are eaten abundantly especially if consumed uncooked. Most cases of Fasciolopsiasis are asymptomatic. Symptoms are generally mild but severe infection can lead to abdominal pain from obstruction mimicking peptic ulcer. Of late, the severe infection present with ascites, oedema of face and extremities, anaemia, anorexia, weakness, persistent vomiting. Deaths have been reported. Diagnosis depends on proper clinical and dietary history along with faecal examination by Stoll's dilution, formalin ether concentration, direct smears or by Kato's techniques. The drug of choice for treatment is Praziquantel and is given in the dosage of 25 mg/kg in 3 doses in a day.

Conclusion

To the best of our knowledge, this rare case presented with Polycystic disease of liver, kidneys, malabsorption, and she responded well to Praziquantel in required dosage. Hence, in rural India, patients presented with long history of fever, GI upset with abnormal USG, X-ray, CT findings; must be correlated with careful history taking to arrive at proper diagnosis of intestinal trematodal disease. The possibility of infestation with Fasciolopsis buski is to be kept in mind when a patient presents with unexplained cystic lesions in liver, kidney and pyrexia.

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