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Clinical Case of Fascioliasis Diagnosed in Patient with Long Time Abdominal Pain

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Abstract: Considering the relevance of Fascioliasis in the Fergana region of the Republic of Uzbekistan, it becomes promising to get acquainted in an article with this type of parasitosis on the example of describing a clinical case of fascioliasis in a patient with a long course of the disease. This article describes a clinical case of fascioliasis due to *Fasciola hepatica* in a female patient who was treated in different hospitals with different diagnoses during a long time period. She had for a long time paroxysmal pain in the right hypochondrium and abdomen. The final diagnosis was made during examining the bile duct of the patient was found a *Fasciola hepatica* 2,5 sm in size.

Keywords: parasitosis, fascioliasis, Fasciola hepatica, liver damage, eosinophilia, pain.

Currently, human parasitic diseases are one of the global problems in medicine. Foodborne trematodes: *Fasciola hepatica* and *Fasciola gigantica* have become a new public health problem in countries such as Southeast Asia and Latin America [1, 2]. Parasites play a significant role in the occurrence and severity of various manifestations and severity of pathological reactions in various organs and systems of the macro-organism, even in cases of subclinical course of the disease [2, 3, 4, 5].

Fascioliasis is a disease that has been frequent in our region in recent years, especially in Fergana region. The disease was first diagnosed in 2014. And during last years, an increase in this parasitic disease has been recorded [6].

The disease is mainly found in areas where agriculture and animal husbandry are widespread, as well as in areas where canals, and streams flow, which are widely used in agriculture and for household use [8, 9].

However, due to insufficient awareness of this disease among medical personnel, patients are treated in different hospitals for a long time with various misdiagnoses. And when the condition worsens, surgical intervention becomes necessary [6, 7].

The main goal for *Fasciola hepatica* is to establish a firm foothold and stay on the walls of the bile ducts of the biliary tract of the host's liver. The Life expectancy of sexually mature fasciola in the human organism is up to 5 years or more. The incubation period is from 1 to 8 weeks [8, 9, 10]. The main pathological changes in the human body are usually associated with the migration of the helminth through the liver parenchyma, which lasts up to 6 weeks or more. At the same time, in the migration phase, due to the development of susceptibility of the organism with larval antigens, as well as tissue damage along the way, corresponding to the early stage of

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the disease, it is characterized by severe toxic-allergic reactions which manifests by fever, leukocytosis and eosinophilia. After the completion of the migration phase, the sexually mature helminth, which has reached the bile duct, can lead to the development of proliferative cholangitis [10].

Confirmation of the diagnosis is possible by microscopic examination of feces (stool) or duodenal contents with the detection of parasite eggs in them, which are detected no earlier than 3 months after infection [11].

For deworming usually prescribed to the patient after the symptoms of inflammation subside. Before deworming should prescribe pathogenetic and symptomatic therapy, enzyme medications, choleretics, antihistamines, drugs that affect intestinal motility, probiotics, and, if necessary, detoxification therapy are prescribed. For deworming the drug of choice according to the WHO recommendation is triclabendazole, the effectiveness of which is assessed by the disappearance of fasciola eggs in the feces and duodenal contents after 4–6 months after treatment [12].

Early diagnosis of fascioliasis will allow timely therapy and recovery without surgical intervention. With a high-intensity invasion by fasciola or the addition of a secondary bacterial infection, due to the pathogenetic development of immunodeficiency conditions, the prognosis for the patient can be serious, up to death [8]. This indicates the importance and significance of early diagnosis of this parasitic disease at the present stage.

Given the relevance of this zoonotic biohelminthiasis in the Fergana region [6, 7], the widespread use of agriculture and animal husbandry [7], the use in agriculture water from of aryks, and the lack of public awareness of this disease, given the possibility of a severe course of the disease, the presence of problems in therapy, it becomes expedient and extremely instructive to consider a case of fascioliasis from clinical practice.

Case presentation. We present a clinical case demonstrating the difficulty of diagnosing fascioliasis in a patient which treated in different hospitals with different diagnoses during for years.

The patient 36 years old, lives in the Fergana city. Works in a beauty salon, deals with snail therapy. According to the patient, she has been ill for 2-3 years. For the first time in August 2016, an attack developed with localization of pain in the right hypochondrium in abdomen and lumbar area, the appearance of rashes on the skin of the face and body.

An epidemiological examination revealed the following: the patient was in contact with relatives (close family members) who did not have any signs of the disease. The patient lives in a multi-apartment building in the Fergana city. Uses centralized tap water as drinking water. She buys food (vegetables, fruits and herbs) mainly at the market. The patient has not left the city for the last 6 years; no guests have come from abroad. The patient does not associate the disease with anything. Doctors failed to identify the main cause of infection.

In the Fergana city the patient went to a city hospital to the gastroenterological department, where after instrumental and laboratory investigations, the patient was

diagnosed with acute cholecystitis, for which she received outpatient treatment. However, there were no significant changes in the general condition of the patient, occasionally pains occurred. During the attack, she took analgesics.

On December 14, 2019, the patient, due to the appearance of pronounced attack of stabbing pain in the right hypochondrium, shoulder, back, and chest, as well as in the abdomen, called an ambulance, which took the patient to the Fergana General Hospital. Based on the above complaints, a sharp decrease in working capacity, general malaise, nausea, vomiting, the presence of icterus of the sclera and skin, loss of appetite, the appearance of darkening of the color of urine (choluria) and acholic feces, she was hospitalized in the department of abdominal surgery with a diagnosis of choledocholithiasi, mechanic jaundice, and biliary hypertension.

An objective examination of the general condition of the patient is severe, in clear mind. The musculoskeletal system is without deformation. Sclera and skin are icteric (++). Tissue turgor is preserved. Peripheral lymph nodes and peritoneal lymph nodes are not enlarged. Vesicular breathing is auscultated in both lungs. Heart sounds are rhythmic, clear, pulse is 102 beats per minute, medium filling and tension, Arterial pressure is 120/70. Tongue wet, white coating. The abdomen is soft on palpation, sensitive in the right hypochondrium and in the epigastric region. Ortner's and Murphy's symptoms are positive. Shchetkin-Blumberg's symptom is negative. The liver and spleen are not enlarged. Intestinal peristalsis is preserved, the stool is acholic, the color of urine is dark, the color. Meningeal symptoms are all negative.

On December 16, 2019, the patient underwent an examination of the analysis of feces and bile (duodenal content) in the parasitological laboratory of the Center for Sanitary and Epidemiological Welfare and Public Health of Fergana Region. In the analysis of feces, parasites and helminths were not found. Fasciola eggs were found in the bile (Fig. 1).

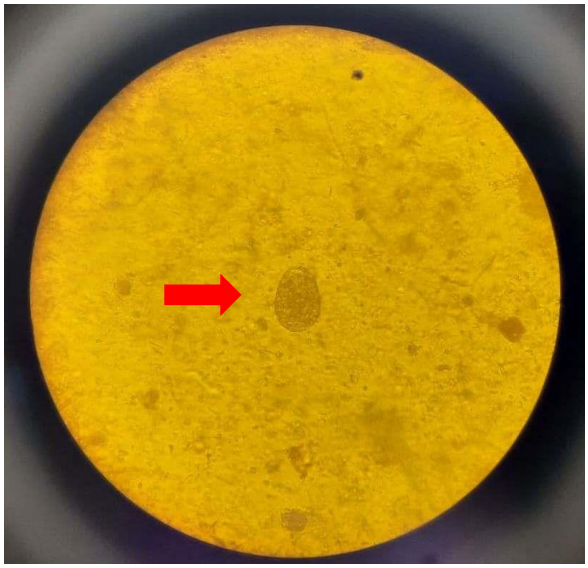

Figure 1. *Fasciola hepatica* egg in duodenal content.

On the basis of ultrasound (1 wavy mobile fasciola was found in the common bile duct (Fig. 2), reactively enlarged lymph nodes in the gallbladder area, non-calculous cholecystitis, congestive gallbladder, signs of cholangitis) and detection of fasciolia in the bile, the patient was diagnosed with Fascioliasis of the proximal third

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of the common bile duct. Chronic non-calculous cholecystitis. Lipomatosis of the pancreas.

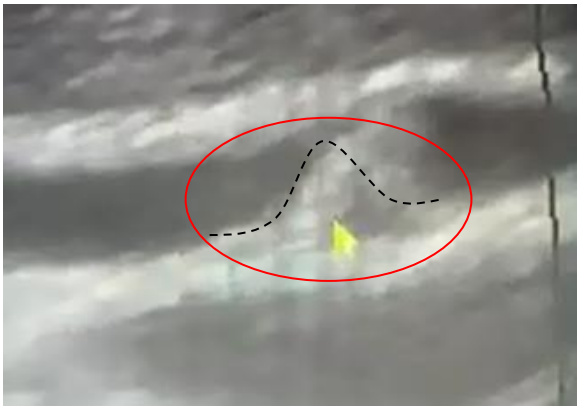

Figure 2. Wavy mobile *Fasciola hepatica* in the common bile duct

Laboratory examination:

Complete blood count: hemoglobin 102 g/l, erythrocytes $4.0x10^{12}$/l, leukocytes $5.9x10^{9}$/l, eosinophil 17%, ESR 21 mm/h.

Biochemical blood test: total protein 57.1 g/l, blood sugar 6.0 g/l, total bilirubin 44 mkmol/l, ALT 1.4 mmol/l, AST 1.2 mmol/l, PTI 81%.

Due to the presence of severe pain syndrome in the patient, on December 19, 2019, the patient had undergone surgery: during endoscopic retrograde pancreatocholongography a 2.5 sm fasciola was removed from the bile duct of patient (Fig. 3).

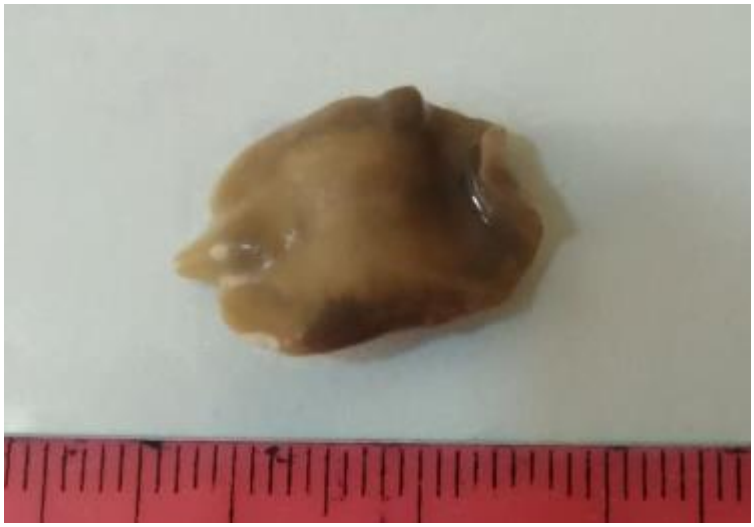

Figure 3. Adult *Fasciola hepatica* which removed from the bile duct

The patient received inpatient treatment for 11 days, where infusion, antibacterial, symptomatic therapy, antiparasitic therapy was carried out: triclabendazole 10 mg/kg per day in two doses with an interval of 12 hours for 1 day.

Laboratory examination after treatment:

Complete blood count: hemoglobin 115 g/l, erythrocytes $4.4x10^{12}$/l, leukocytes $9.4x10^{9}$/l, eosinophils 3, ESR 10 mm/h.

Biochemical blood test: total protein 51.2 g/l, blood sugar 5.5 g/l, bilirubin 12 mkmol/l, ALT 0.75 mmol/l, AST 0.55 mmol/l.

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On repeated ultrasound after surgery, the volume of the gallbladder decreased, parasites were not found.

On December 25, 2019 the general condition of the patient with positive dynamics. There is no pain in the right hypochondrium and in the abdomen, the skin without rashes. When the laboratory blood values approached closer to normal, the patient was discharged home, with recommendations: diet, enzymatic medication for 10 days with meals, no-shpa by 1 tab. x 2 times in a day during 10 days, amoxicillin by 1 tab. x 4 times in a fay for 5 days, followed by probiotics. It is recommended to repeat the laboratory test for fascioliasis after 3 and 6 months and repeat the intake of triclabendazole 10 mg/kg per day in two doses with an interval of 12 hours for 1 day 3 months after discharge from the hospital with a positive laboratory result.

After the patient was discharged, a laboratory test for fascioliasis was carried out, by examining the analysis of feces and duodenal content – fasciola eggs were not found. The symptoms of the disease did not recur. When re-examination of ultrasound – mobile *Fasciola hepatica* were not found.

Conclusion

The presented clinical case demonstrates the difficulties that doctors have to face in the diagnosis and treatment of fascioliasis. Late treatment of the patient for medical help and untimely diagnosis of the disease can lead to a severe course of the disease.

The clinical case shows that it is rather difficult to suspect this invasion only on the basis of clinical data, because a similar clinical picture can also be characteristic of other diseases of an infectious and non-infectious nature. It becomes expedient to conduct a study of the patient's feces, using a standard and publicly available technique for the presence of helminth eggs, which will allow timely elimination of this invasion.

Thus, there is an increasing need to inform people about the sanitary and epidemiological situation and the possible risk of infection with fascioliasis, about personal prevention measures and actions in case of illness, especially in epidemiologically disadvantaged areas.

Epidemiological alertness, careful history taking, and competent analysis of clinical and laboratory data are needed to make an early diagnosis and choose the right therapy.

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