

Hepatic paragonimiasis misdiagnosis as primary liver cancer: a case report

Weinan Li¹, Zhengwei Leng², Gang Yang¹, Yong Li¹, Qiang Li¹, Gang Shi^{1*}, Jingdong Li^{1*}

¹Digestive System Cancer Research Center, Institute of Hepatobiliary, Pancreatic and Intestinal diseases, North Sichuan Medical College, Nanchong 637000, China

²Department of General Surgery, Union Hospital, Huazhong University of Science and Technology, Wuhan 430022, China

Abstract: Hepatic paragonimiasis is a form of ectopic infestation disease which can be caused by paragonimus. In this case report, we reported a case was diagnosed and treated as a hepatic paragonimiasis in 2015 in our hospital. The patient was accepted left lobotomy resections. Pathologic diagnosis showed that parasitic disease on the left liver lobe. Then is diagnosed as paragonimiasis. But the symptoms and recurrence was not found during follow-up period for 4 months.

Keywords: Liver; Paragonimiasis; Diagnosis; Treatment

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*Corresponding Author: Gang Shi, shigang72915@163.com; Li Jingdong, lijingdong358@126.com

1. Introduction

Paragonimiasis is a lung parasitic disease, it is caused by the paragonimus parasites in human lung and colonization of parasitic diseases. It can also shift in subcutaneous, brain, liver, spinal cord, muscles and in the eyes forming systemic fluke disease. Liver paragonimiasis is few. For the long incubation period, liver paragonimiasis progress is slow, lack of typical clinical symptoms and signs, laboratory examination with lower specificity, therefore, always it is delayed for diagnosis and treatment. In this case, we report the diagnosis and treatment of a case of hepatic paragonimiasis in 2015.

2. Case

A 48-year-old woman was transferred to Zunyi Medical College because of the paroxysmal ache in abdominal and related to the back pain without other symptoms such as nausea, vomiting, chest tightness, shortness of breath, cough and sputum. Computed tomography (CT) scan in other hospital showed that the mass of the lesion was low in density in the left liver and the edge is irregular. This case was considered as bile duct carcinoma. In order to get a further diagnosis and treatment, then the patient was entered into our hospital. Physical examination indicated that abdominal signs were normal and not any positive signs. CT scan in our hospital showed that the left hepatic lobe had slightly narrow, the edge not smooth, large low density shadow, the boundary not clear, the mass of the lesions low in density. And then the contrast enhanced CT showed heterogeneous density increasing (Figure 1). Chest radiography showed that few high density shape nodules were in both lungs. Hepatic function indexes of ALT, AST, ALP, GGT, TBIL and DBIL were

39U/L, 42U/L, 124U/L, 37U/L, 6.3ummol/L and 2.1ummol/L, respectively. The tumor markers such as AFP, CEA, CA19-9 and CA125 were normal. Blood routine examination appeared that the total leucocytes, the percent of neutrophile granulocyte, the percent of lymphocytes, the percent of monocytes, the percent of eosinophilia and the percent of basophilia were 7.23×10^9 , 42%, 17%, 10%, 30% and 1%, respectively. Clinical diagnosis were given several results such as left liver lobes lesions, or primary liver cancer, or inflammatory pseudotumor. Left lobotomy resection was performed on March 20 2015. During operation, we observed the size of the left hepatic lobe dark gray color exogenous lesion was about 5cm×5cm, and the surface of the lesion was smooth. The remaining liver was normal. Postoperative pathology examination showed liver tissue destruction, fistula formation, a large number of neutrophils, pus cells and necrotic tissue in sinus tract. We can also found much Charcot Leyden crystal, granulation tissue, epithelioid cells and a small number of multinucleated giant cells with a large number of inflammatory cells and a large number of eosinophils invasion on the sinus wall. Pathologic diagnosis was given as paragonimiasis basis on parasitic disease on the left liver lobe (Figure 2).

3. Discussion

The liver paragonimiasis is a kind of extrapulmonary paragonimiasis, it is caused by invasion of ectopic paragonimus[2]. Western man paragonimus is widely in Asian, African and South American. The source of infection is the eggs that was excreted from the men and the Carnivorous mammals. The first intermediate host is the snails living in freshwater, the second intermediate host of paragonimus is the freshwater crabs. Freshwater

shrimp also can be used as an intermediate host. Wild boar, pigs, rabbits, mice, frogs, chickens, birds and other animals can be the transport host[3]. Many patients with liver paragonimiasis maybe eat freshwater crayfish or crabs, who also be caused by drinking water containing Metacercaria infection. In addition, many patients were infected by eating the meat of transport host.

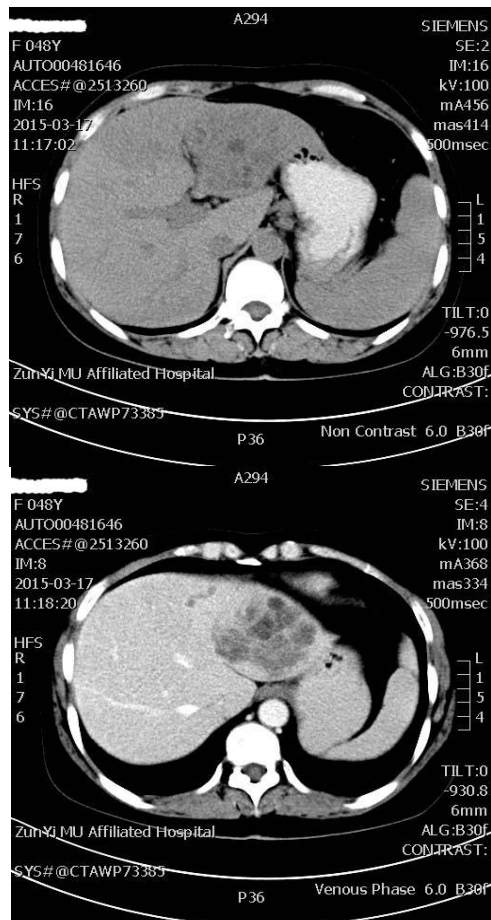


Figure 1. Computed tomography(CT): The left hepatic lobe slightly narrow and the edge not smooth, many low density shadow inside, the boundary is not clear, the mass of the lesions were low in density in it, the contrast enhanced CT have heterogeneous density.

The liver paragonimiasis is rare. Paragonimus westermani pathogenesis is mainly composed of adult worm schistosomula migration harass parasites in the tissues and organs. The pathological changes always were divided to acute and chronic disease[3]. The acute phase is caused by the migration of schistosomula. The ingested metacercariae excyst in the upper intestine (especially in the duodenum) can migrate across the intestinal wall and reach the peritoneal cavity. Most of the schistosomula worm from the liver surface enter the liver tissues. It can lead to a regional hemorrhage and necrosis[4]. In this

case, liver paragonimiasis attacks the liver and forms a exogenous focal liver lesions. We can see scattered gray nodules after slit the lesion. The worm migrating into liver tissue leads to the tissue destruction, bleeding. More granulomatous tissue implant on the cystic wall, the content of the cyst gradually was absorbed, and then granulomatous tissue can fill in. Finally, the focal fibrosis gradually form a kind of circular space-occupying lesions. Imaging examination showed some obviously space-occupying lesions. So those space-occupying lesions easily were misdiagnosed as primary liver cancer.

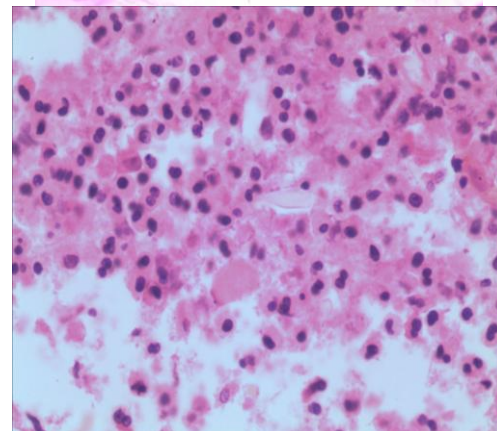
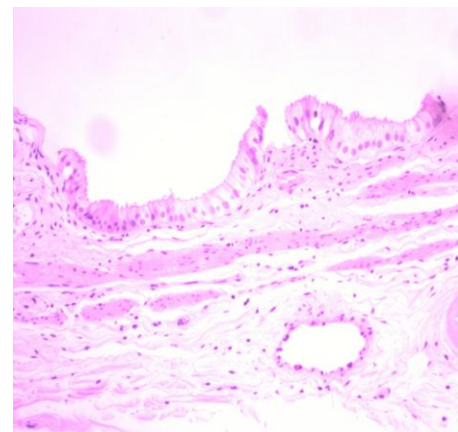


Figure 2. Much Charcot Leyden crystal, granulation tissue, epithelioid cells and a small number of multinucleated giant cells with a large number of inflammatory cells and a large number of eosinophils invasion on the sinus wall.

In laboratory examination, routine blood has obviously changing in liver paragonimiasis. The white blood cells increased. Among them, the eosinophil increased obviously, generally is 20-40%, this case was 30%[5]. Some patient erythrocyte sedimentation changing are fast. For this case, erythrocyte sedimentation was not implemented because hepatocellular carcinoma was considered before surgery. Other laboratory tests usually are abnormalities. It can be diagnosed basis on the

detecting the sputum, feces, or in the organization. In fact the positive cases are few. So it is also difficult to diagnose. Immunological tests can be used as an key way of auxiliary diagnosis. Enzyme-linked immunosorbent assay (ELISA) is the primary choice methods for the diagnosis of liver paragonimiasis, it has the high sensitivity and pecificity[6]. However, pathological examination is still the gold standard in the diagnosis of hepatic paragonimiasis.

The diagnosis of hepatic paragonimiasis is usually difficult due to it is a rare disease and lack of specific symptoms and manifestations. It is easily misdiagnosis. We found the main reasons of misdiagnosis in this case as follows: (1) hepatic paragonimiasis is a rare disease and lack of specific clinical manifestations; (2) clinical doctors not enough knowledge about this disease; (3) More tumor markers such as AFP, CA19-9, the abdominal CT lack of typical radiographic signs of primary liver cance are necessary. But these were ignored. Although the eosinophil increased obviously in laboratory examination, it is lack of nonspecific, and it is also lack of specificity of imaging examination. We combined the clinical data of the patients with related literature and consider liver paragonimiasis. Other reasons such as the eating habits history for freshwater crayfish or crabs, long-term fever, fatigue and anorexia for unknown reason, especially a history of paragonimiasis, history of paragonimiasis, laboratory tests suggest eosinophil increased obviously and AFP is negative.

4. Conclusion

Paragonimiasis is a parasitic infestation, the treatment includes pharmacotherapy and surgery. The main treatment drugs are praziquantel or three azole chlorobenzene. The surgery is meant to resection the regional lesions. This patient was confirmed by postoperative pathology, who was treated by praziquantel.

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