

Hepatic Alveolar Echinococcosis that Incidentally Diagnosed and Treated with R1 Resection

Rastlantısal Olarak Tanı Konan ve R1 Rezeksiyonla Tedavi Edilen Karaciğer Alveolar Ekinokokkozisi

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Abstract

In this report, we present an incidentally diagnosed and surgically treated patient with hepatic alveolar echinococcosis.

Key Words: Alveolar echinococcosis, Liver, Resection

Özet

Bu yazıda, rastlantısal olarak tanınan ve cerrahi ile tedavi edilen karaciğer alveolar ekinokokkozisli bir hasta sunulmaktadır.

Anahtar Kelimeler: Alveolar ekinokokkozis, Karaciğer, Rezeksiyon

Introduction

Hepatic alveolar echinococcosis (HAE) is a progressive and fatal disease caused by the zoonotic agent *Echinococcus multilocularis* (*Echinococcus salveolaris*). Although the disease commonly shows a silent and tumor-like progression and diagnosis is generally made in a non-resectable stage, some cases, particularly incidental diagnoses, are diagnosed during an investigation for a non-specific symptom [1-4].

In this report, we present a 23-year-old patient with hepatic alveolar echinococcosis that was incidentally diagnosed and treated with R1 resection.

Case Report

A 23-year-old male patient was admitted to our clinic with a one-year history of non-specific epigastric pain. Clinical examination demonstrated no positive physical signs. Laboratory tests revealed elevated serum alkaline phosphatase and lactate dehydrogenase levels. Abdominal ultrasonography showed a hypodense, well-shaped cystic lesion with peripheral calcifications. Abdominal computed tomography demonstrated a 6 cm diameter cystic mass in 4a and 4b segments of the liver, which contained punctate calcifications consistent with hepatic alveolar echinococcosis. The common hepatic artery was invaded, and the portal vein and common hepatic duct were compressed by the mass (Figure 1).

A laparotomy was performed, and an R1 resection was performed because an R0 resection was not possible due to

the invasion of the hepatic artery. The mass was resected from the liver with a clear margin, but a minimal residual mass was left in the common hepatic artery; thus, the compression of the common hepatic duct and portal vein by the mass was relieved (Figure 2). Histopathological examination revealed alveolar echinococcosis. Albendazole treatment (10 mg/kg/day) was administered. The patient had an uneventful recovery. There was no extra growth in the residual mass in abdominal computed tomography after a 4-year follow-up period (Figure 3).

Discussion

Hepatic alveolar echinococcosis is a silent disease. A slow-growing mass invading adjacent structures is the characteristic feature of this disease; therefore, diagnosis is commonly made at the advanced stages. The symptoms of the disease are non-specific and vary from epigastric pain to jaundice secondary to obstruction or invasion of the biliary structures [5, 6]. Incidentally diagnosed HAE is not a rare entity, and as in our patient, simple epigastric pain or other non-specific symptoms can be the only manifestation of HAE, especially in endemic areas [1-4].

Abdominal imaging modalities, such as ultrasonography, computed tomography and magnetic resonance imaging, can be used in the diagnosis. While these modalities mostly provide satisfactory information about the disease in endemic areas, as in ours, further diagnostic investigative tools, such as biopsies, may be needed in non-endemic regions [7-9].

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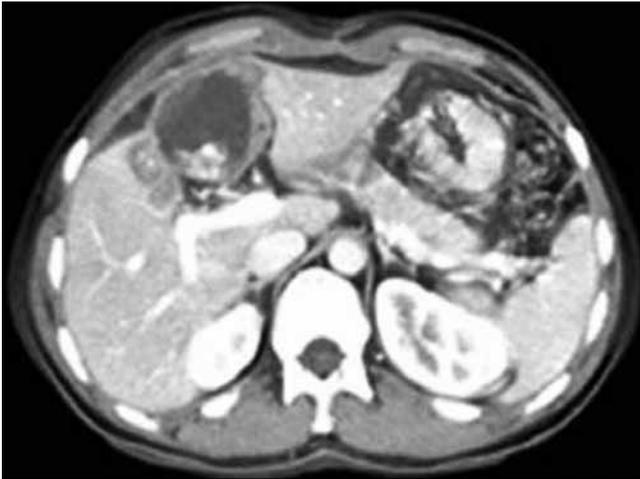


Figure 1. Preoperative abdominal computed tomography images show a 6 cm-diameter cystic mass in 4a and 4b segments of the liver with common hepatic artery invasion in addition to compression of vena portae and common hepatic duct.

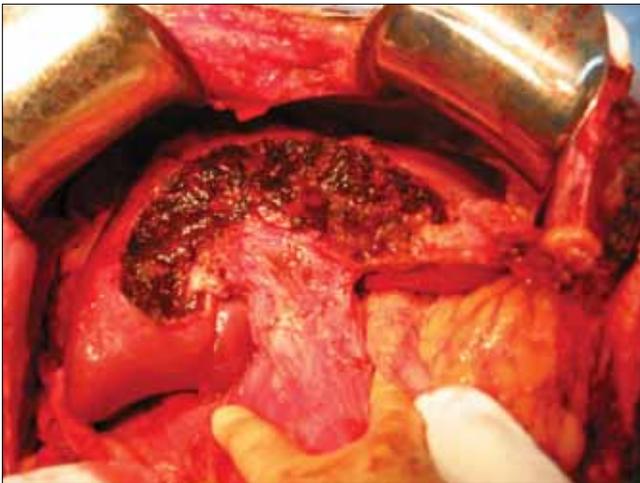


Figure 2. Operative appearance demonstrates the resection of the mass.

The treatment of HAE is primarily surgical, and definitive surgical treatment is resection of the mass with histologically clear margins (R0 resection). However, R0 resection rates are low, and only 20-40% of patients can be treated with R0 resection. The most important reason for non-resectability is the invasion of vascular structures, such as the hepatic artery, portal vein, vena cava and hepatic veins [3, 9]. In such cases, a non-margin-free resection is not advised. However, in patients with a minimal residual parasitic mass, an R1 resection (histologically positive resection margin) could be another alternative. In our case, the common hepatic artery was invaded by the parasitic mass, which made an R0 resection impossible. However, resection of the mass leaving a minimal residual lesion over the hepatic artery allowed us to relieve the compression of the portal vein and biliary tract.



Figure 3. Postoperative abdominal computed tomography image reveals no extra growth in the residual mass.

Subsequently, with the addition of albendazole treatment, we could stop the growth of the parasitic mass. Anti-parasitic drugs have parasitostatic effects and inhibit the growth of parasitic masses [5, 6, 9]. Therefore, R1 resection leaving a minimal residual parasitic mass and additional albendazole treatment could be an effective treatment in this case.

Generally, the treatment of HAE is surgical resection with clear margins. However, in different cases, tailor-made treatment options should be known and employed.

Conflict of interest statement: The authors declare that they have no conflict of interest to the publication of this article.

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