

# Hepatocellular Carcinoma Recurring in the Opposite Lobe Nine Years After Regular Right Hepatectomy

Gürcan Şimşek, Adil Kartal, Ahmet Tekin

## ABSTRACT

A recurrence was detected in the remaining left lobe of a patient who underwent regular right hepatectomy 9 years ago because of HCC (hepatocellular carcinoma). Left lateral segmentectomy was performed on the patient. Following right and left hepatectomies, the patient survives with hypertrophied segment IV. We think that the FHCC (fibrolamellar HCC) that recurred in the opposite lobe 9 years after is a secondary primary tumor. The patient received no adjuvant therapy after the second resection and no recurrences were seen in the remaining segment IV during the 36-month follow-up.

**Key words:** Hepatocellular carcinoma, repeat hepatectomy, fibrolamellar.

## Regüler Sağ Hepatektomiden Dokuz Yıl Sonra Karşı Lobda Nüks Eden Hepatoselüler Karsinom

### ÖZET

Hepatoselüler karsinom (HCC) nedeni ile regüler sağ hepatektomi yapılan hastada takipleri esnasında nüks tespit edildi. Hastaya sol lateral segmentektomi operasyonu uygulandı. Sağ hepatektomi sonrası yapılan sol lateral segmentektomi neticesinde hasta yaşamını hipertrofiye uğramış segment 4 ile sürdürmektedir. Sağ hepatektomiden 9 yıl sonra karşı lobta nüks eden fibrolamellar HCC nin nüksten daha çok ikincil bir primer tümör olduğu kanısındayız. Hastaya ikinci rezeksiyon sonrasında herhangi bir adjuvan ilaç verilmedi ve hastanın 36 aylık takibinde nükse rastlanmadı.

**Anahtar kelimeler:** Hepatoselüler karsinom, tekrarlanan hepatektomi, fibrolamellar

## INTRODUCTION

Hepatocellular carcinoma (HCC) is an aggressive tumor that generally develops from the cirrhotic base related to chronic viral hepatitis. The risk of HCC increases as the person ages and it is more frequently seen in men than women (1, 2). Upper right quadrant pain, weight loss, and mass in the liver are the classic triads of HCC (2, 3). Alpha-fetoprotein (AFP) is a significant and useful test commonly used in the diagnosis and follow-up of HCC. If the AFP value is above 250 ng/dl, it is significant for HCC. In 40% of the cases with small tumors and in fibrolamellar HCC (FHCC), AFP values might be within normal limits. There are studies that show that the serum AFP level is not related to the stage, clinic, and the prognosis of the patient (3). FHCC is a variant of HCC

that is more frequently seen in the younger population with no differences between male and female patients, and that is even seen slightly more in female patients, and where AFP values are mostly normal. Chronic liver diseases at its base are found only in 20% of the cases. FHCC is seen as a single mass lesion with fine borders in the liver and its chances for resection are more than the classic HCC cases.

## CASE

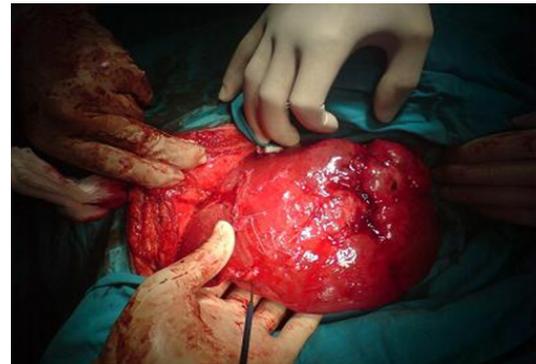
A 55-year-old male patient presented to our clinic with complaints of pain and sensation of fullness in the epigastric area. It was learnt from the patient's history that he had an operation 9 years ago because of liver

Necmettin Erbakan University, Meram Medical Faculty, Department of General Surgery, Turkey

Correspondence: Gürcan Şimşek  
Alavardı mah. Serdar Sok. No:4/5 ,42090,Meram/KONYA,TÜRKİYE  
Telephone: +90 223 61 23, 0535 642 60 75 Fax: +90 332 2236182  
E-mail: gurbansimsek@gmail.com

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tumor and that he was skipping his follow-ups for the last two years. When the medical records of the patient were studied, it was seen that he had undergone right hepatectomy procedure because of FHCC at our clinic. The patient's follow-ups were regularly performed for 7 years in the post-op period and his latest follow-up ultrasonography (USG), which showed no lesions in the remaining left lobe, was performed 2 years ago. The abdominal examination of the patient revealed a palpable mass which had irregular contours, was hard, mobile upon breathing, and sensitive and it partly filled the epigastric field. Lab results of the patient were normal and the upper abdominal USG showed a mass lesion of 12x11 cm in the left lobe inferomedial field containing heterogeneous hypoechoic fields with lobule contours. Through the subsequent dynamic liver CT (Figure 1), a lesion of about 10x12 cm with a central scar in its center in the left lobe lateral segment of the liver was defined. Tru-cut biopsy was performed for the differential diagnoses of FHCC and focal nodular hyperplasia. The lesion was reported as FHCC. Left lateral segmentectomy was planned for the patient. However, since the patient had a previous history of right hepatectomy, whether the remaining liver parenchyma would suffice for the patient's survival arose as a problem. The volume of segment IV was evaluated through CT. Since the remaining segment IV volume following the procedure was more than 30% of the standard liver volume which was estimated according to the Urata formula through CT, it was decided that an operation should be performed and the patient underwent left lateral segmentectomy (Figures 2-4). There were no complications during or after the

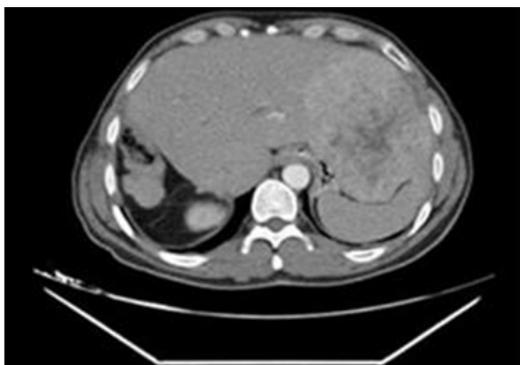


**Figure 2.** Determining the resection borders before lateral segmentectomy performed in order to remove the tumor.

surgery. The patient was discharged on post-op day 6 without any problems. The pathological analysis of the tumor revealed FHCC. The result was similar to the pathology of the first resection (Figures 5, 6). There were no problems in the follow-ups and the patient's follow-up CT showed hypertrophied segment IV. It has been 39 month after the left lateral segmentectomy of the patient and no recurrences have been observed (Figure 7).

#### DISCUSSION

Surgical resection has been the selected method of HCC treatment for about 60 years. Resection is a method of treatment that currently enables long-term survival.



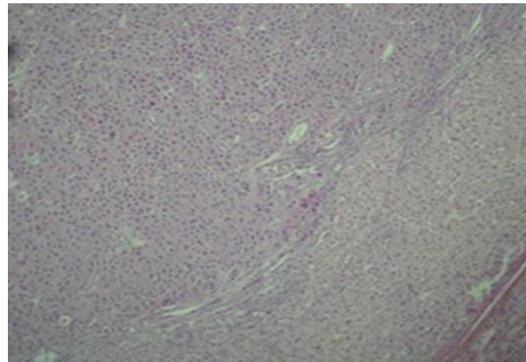
**Figure 1.** CT imaging of the recurrent tumor in the remaining left lobe of a patient with right hepatectomy.



**Figure 3.** Lateral segmentectomy material and the outlook of the tumor following resection.



**Figure 4.** The outlook of hyperthrophied segment IV that enables the survival of the patient following lateral segmentectomy.



**Figure 6.** Microscopic outlook of the tumor excised by lateral segmentectomy.

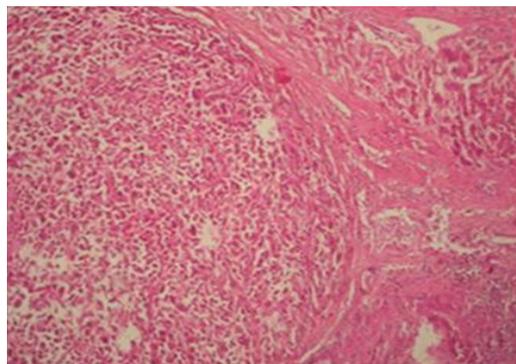
The most important disadvantage of resection is that it has a high rate of recurrence (4, 5). Most of these recurrences happen in the form of intrahepatic recurrences. This situation places hepatectomy to the agenda again. In a study covering 1177 HCC cases conducted by C. Wu et al., it was stated that 149 patients had a second, 35 patients had a third, and 8 patients had a fourth hepatectomy and the authors argued that 2nd and 3rd hepatectomies increased the chance of survival (6). Our case in this article had a regular right hepatectomy 9 years ago and a recurrence was detected in the left lobe's lateral segment 9 years after the procedure. Initially resection was considered for the patient because the tumor was single in this case and its pathological diagnosis was

FHCC. The fact that the patient had about 7-8 years of disease-free period following the first resection shows that re-hepatotomy is the most appropriate therapeutic modality for the patient. A study by Makuuchi et al. states that in cases with resections for single HCC, disease-free period is longer than 1 year if intrahepatic recurrence takes place and the most appropriate treatment is re-hepatectomy if there is no portal vein invasion (7). Therefore, left lateral segmentectomy was performed on the patient.

The most significant characteristic that pointed out to the survival of the patient with hyperthrophied segment IV in the post-op period was the fact that the liver of the patient, who previously had right hepatectomy, was



**Figure 5.** Microscopic outlook of the tumor 9 years ago.



**Figure 7.** CT imaging of the patient in post-op 39th month.

normal. Since the patient's liver functions were normal, only the remaining volume was evaluated. There was no need for indocyanine green clearance test. The patient's tumor that appeared in the opposite lobe 9 years after the resection might be delayed metastasis. The fact that both tumors have similar pathologies supports this argument. However, the fact that a tumor like FHCC, which has a high recurrence rate even after adequate resection, recurs 9 years later increases the possibility that it is a secondary primary tumor rather than metastasis. It is very hard to respond to the question whether the tumor is a secondary primary tumor or delayed metastasis. As a result, we believe that re-hepatotectomy should be the selected method of treatment for recurrences following the first resection in FHCC. Because FHCC patients' liver parenchymas are not cirrhotic and failure profile does not appear even after major resections. There is no adequate information on approaches to follow-ups and recurrences of FHCC patients following resection in literature.

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