"Liver-First Approach" as an Unusual Treatment Modality for Rectal Cancer with Synchronus Liver Metastasis: Report of a Case

Eşzamanlı Karaciğer Metastazlı Rektum Kanserinde Nadir Bir Tedavi Yöntemi Olarak "Önce Karaciğer Yaklaşımı": Olgu Sunumu

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ABSTRACT

Overall survival is usually determined by the number and the magnitude of liver metastases in colorectal cancer patients with synchronous hepatic metastases. Traditionally, the standard treatment of such patients are, firstly colorectal resection of the primary tumor, then if possible, the resection of liver metastases after chemotherapy. Here, we present a case of rectal cancer with synchronus liver metastasis which underwent reverse approach.

Key Words: Colorectal cancer, synchronous liver metastasis, hepatectomy, resection

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ÖZET

Genel sağkalım, senkron karaciğer metastazı olan kolorektal kanserli hastalarda sıklıkla metastazların sayısı ve ebatına göre belirlenir. Geleneksel olarak böyle hastalarda standart tedavi, öncelikle primer kolorektal tümör rezeksiyonu daha sonra mümkünse, kemoterapi sonrası karaciğer metastazlarının rezeksiyonudur. Bu yazıda, reverse bir yaklaşım uygulanan senkron karaciğer metastazlı rektal kanser olgusunu sunmaktayız.

Anahtar Sözcükler: Kolorektal kanser, senkron karaciğer metastazı, hepatektomi, rezeksiyon

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INTRODUCTION

Twenty to twenty-five percent of colorectal cancer patients have synchronous hepatic metastases on the first admission. However, 10% to 20% of these patients are eligible for surgical resection (1). The standart treatment of liver metastases are, firstly colorectal resection of the primary tumor, then if possible, the resection of liver metastases after 3 to 6 cycles of chemotherapy. However minority of patients benefit from this treatment approach, because synchronous liver metastases usually show progression after the treatment of the primary tumor. In fact, the prognosis of patients with colorectal cancer is determined by mostly liver metastases. In this case report, "liver-first approach" method is discussed.

CASE REPORT

A 64 year-old, male patient was admitted with changes in bowel habits. A rectosigmoid ulcerovegetative tumor, almost completely obstructing the lumen was found approximately at 10th cm. Abdominopelvic CT scan taken for staging, significantly showed the 5.5 cm tumor narrowing the lumen of rectosigmoid and a large number of lymphadenopathies adjacent to the left-lateral of this field. In addition, a solitary lesion approximately 4×3.5 cm in size and compatible with liver metastasis was reported in on the inferolateral of right lobe of the liver (Figure 1). The biopsy report was compatible with adenocarcinoma. Isolated right posterior sectorectomy and loop ileostomy were performed.

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After 3 cycles of postoperative chemotherapy, the positron emission tomography scan of the patient was repeated 3 months later. No lesions were observed in the liver. Thereupon, a low anterior resection for the rectal primary tumor was performed (Figure 2). The case was discharged without any postoperative complication. A follow-up after 18 months revealed that he was alive without any tumor recurrence.

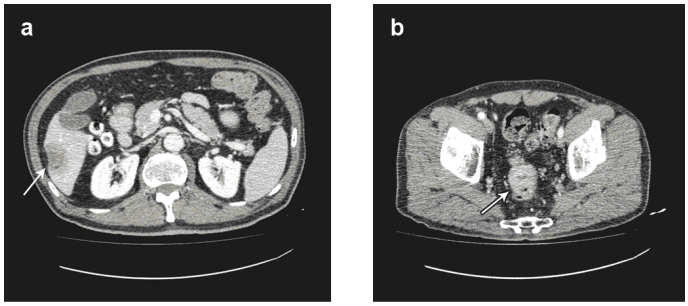


Figure 1. Transaxial CT of liver metastases in the liver, the right lobe segment includes 6, 4×3 cm hypodense lesion with irregular contours compatible with metastasis (a). Pelvic transaxial plane, rectosigmoid tumor is significantly narrowing the lumen throughout the 5.5 cm in length and significantly a large number of advanced lymphadenopathy observed adjacent to the left lateral of this area (b).

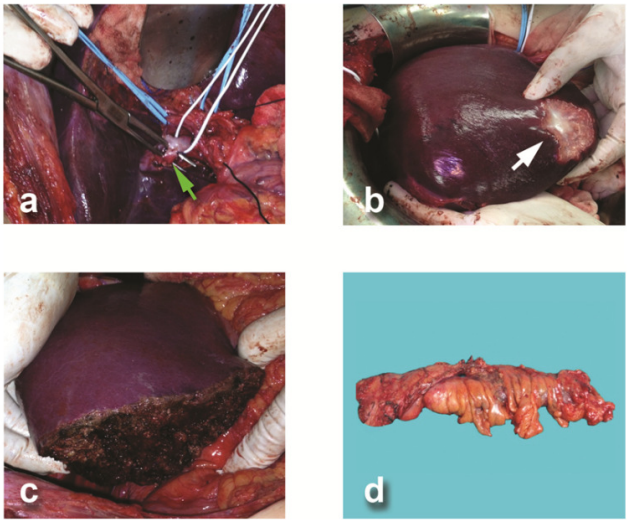


Figure 2. Isolating the posterior branch of the right portal vein (a). Observation of the mass and the demarcation line (b). Removal of the right posterior sector and the mass (c). Low anterior resection specimen (d).

DISCUSSION

The traditional approach to the synchronous liver metastases of colorectal cancer is the removal of the primary tumor followed by the liver resection (2). In recent years, some surgeons advised the resection of concurrent liver metastases or the resection of the metastases before the primary tumor approach. However, no randomized controlled trial compared these approaches with each other (3). Approximately 25% of metastatic tumors that do not respond to chemotherapy, are eligable for surgery (4). On the other hand, while the simultaneous resection is performed, it is forseen that the occult micrometastases remained in the remnant liver parenchyma (5). Approximately 30% of patients with locally advanced rectal cancer have synchronous liver metastases (6,7). Assuming that the period of chemoradiotherapy is, at least 6 weeks, and no complications develop in the liver metastases, surgery would be delayed for about 3 months. The risk of complications also increases, affecting the prognosis. Studies indicated that with the resection of the primary tumor, the disappearance of the tumor - induced inhibition of angiogenesis leads to a faster growth of liver metastases. For colorectal cancer patients with a synchronous liver metastasis, the main determining factor for poor prognosis is the metastasis in the liver. However, the surgical delay due to chemotherapy, is also a cause in the metastatic liver tumor progression (6).

There are still some controversial aspects of the traditional treatment modality. The first difficulty is assessing the response to chemotherapy in the metastatic disease, and the probable potential for proggression. Another question mark is the impossibility to determine the location and the nature of the tumor that completely responds to chemotherapy. Subsequent recurrences of occult metastases may be theoretically expected in the future. In addition, the surgical risk of liver resection increases due to a chemotherapy-induced paranchymal damage (8).

"Liver-First approach" includes a major hepatectomy following a chemotherapy, and then the rectal resection of the primary tumor. Also Reddy et al. has suggested that the delivery of the chemotherapy regimen after the resection for synchronus colorectal liver metastases, makes a positive contribution to the progression-free and overall survival (9).

For this procedure, the appropriate patients are those who have Stage IV colorectal cancers and synchronous liver metastases without complications such as obstruction, bleeding and perforation. The main purpose is not to delay the treatment of the metastatic disease with the local treatment of the primary tumor. Slesser et al. conclude that the most important point is the situation and the stage of the liver metastasis for determining the appropriate patient for the “liver-first approach” or the synchronus resection; nevertheless, the syncronus resection could be performed on the patients who has extensive liver metastases with an early rectal cancer (3).

Haas et al. pointed out that performing the synchronus resection reduces the length of the hospital stay. However, it also has a negative effect on disesase-free survival according to step-by-step procedures (10).

CONCLUSION

"Liver-first- approach" is the latest and one that is most suited for patients with advanced rectal cancers. In the literature, the morbidity and mortality rates are 19% and 0%, respectively, and the 3-year survival rate is 83% (11). For synchronous hepatic metastases in patients with an advanced stage rectal primary tumor " liver-first approach" is an acceptable procedure with low morbidity and mortality rates. Our case also shows the feasibility of this approach. Establishing local institutional guidelines may obviously increase the usage of this approach in metastatic colorectal cancer patients.

Conflict of Interest

No conflict of interest was declared by the authors.

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