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CASE REPORT

Charles Honoré
Olivier Detry
Arnaud De Roover
Michel Meurisse
Pierre Honoré

Liver transplantation for metastatic colon adenocarcinoma: report of a case with 10 years of follow-up without recurrence

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C. Honoré · O. Detry (✉) · A.De Roover
M. Meurisse · P. Honoré
Department of Liver Surgery and Transplantation, University of Liège, CHU Sart Tilman B35, 4000, Liège, Belgium
E-mail: oli.detry@chu.ulg.ac.be
Tel.: +32-4-3667645
Fax: +32-4-3667069

Abstract Because of dismal mid-term and long-term results, secondary liver cancer is considered an absolute contra-indication to cadaveric liver transplantation, with the relative exception of metastases of symptomatic neuro-endocrine cancers. The authors present in this report the case of a patient who has been enjoying 10 years of cancer-free survival after liver transplantation as rescue therapy for acute liver failure after liver resection for isolated hepatic metastasis of colon adenocarcinoma. This case shows that in some highly selected cases, liver transplantation may be curative in patients with liver metastases of colon carcinoma.

Keywords Liver transplantation · Surgery · Acute liver failure · Colon cancer · Adenocarcinoma · Liver metastases

Introduction

Liver metastases are now considered an absolute contra-indication to cadaveric liver transplantation (LT) [1], with the relative exception of metastases of symptomatic neuro-endocrine cancers [2]. Very few short series of LT for secondary liver cancer were reported in the late 1980s and early 1990s [3, 4], with survival rates as low as 14% at 2 years and without long-term cancer-free survival. The authors present, herein, the case of a patient who has been enjoying 10 years of cancer-free survival after LT as rescue therapy for acute liver failure after liver resection for isolated hepatic metastasis of colon adenocarcinoma.

Case report

A man, born in 1946, was diagnosed as having a well-differentiated adenocarcinoma of the sigmoid colon, staged B2 according to the Dukes–Asler–Coller classification. He underwent sigmoid colon resection without adjuvant therapy in 1989. In 1992, a rise in carcinoembryonic antigen (CEA) was noted, leading to the diagnosis of an isolated, 5 cm-large hepatic metastasis (Fig. 1). Partial hepatectomy, removing all of segment VIII and part of segments IV, V, and VII, was performed under total vascular exclusion. The procedure was complicated by early ischaemic acute liver failure, leading to emergency LT. The patient did not undergo any post-transplant chemotherapy. Ten years later, the patient was free of cancer recurrence, as assessed by blood CEA levels, thoracic and abdominal computed tomography, bone scintigraphy, and positron emission tomodensitometry.

Discussion

Organ transplant recipients are prone to de novo cancer development and pre-existing cancer recurrence. Among other causes, immunosuppression has been related to tumour occurrence or development, according to the immune surveillance hypothesis that suggests that the immune system might control cancer development [5]. Moreover, it has recently been suggested that cyclosporine directly influences cancerous cells and induces tumour progression by a cell-autonomous mechanism that may be linked to the production of transforming growth factor-β (TGF-β) [6]. As a consequence, when

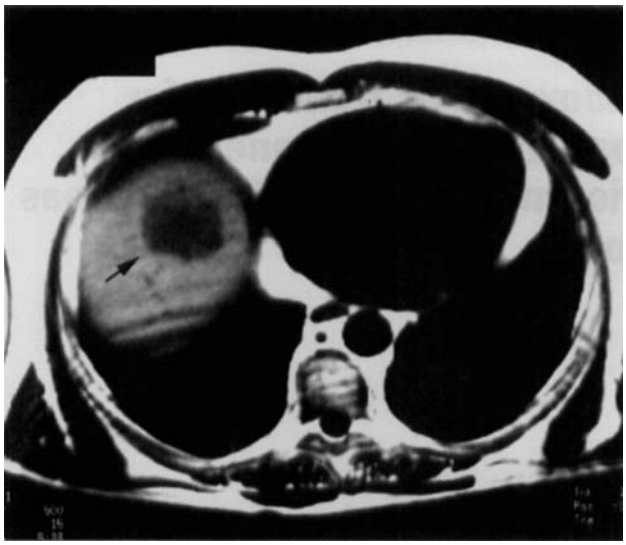

Fig. 1 Magnetic resonance imaging of the 5-cm liver metastasis (*black arrow*) in segment VIII

LT is performed for secondary or even large primary (hepatocarcinoma or cholangiocarcinoma) liver tumours, early cancer recurrence is common and usually very aggressive. Results of these procedures are dismal, and LT is not a recognized therapy for secondary liver cancer, with the exception of symptomatic neuro-endocrine liver metastases [1, 2].

However, this case shows that long-term recurrence-free survival may be possible in patients undergoing LT for hepatic metastases of colon adenocarcinoma. In this particular patient described above, who was the only patient to have undergone transplantation for this indication in the authors' 15 years of LT experience, prognosis factors for cure after liver resection were good, since the metastasis was unique and the primary tumour showed a well-differentiated adenocarcinoma without lymph node involvement.

LT might therefore be curative in highly selected patients with secondary liver cancer, especially in the setting of newer and more effective chemotherapy agents. However, the number of patients with liver metastases that are unsuitable for liver resection but suitable for transplantation is probably very low. Rescue transplantation after large liver resection that is complicated by liver failure might be the most frequent clinical situation in this setting.

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