Chirurgia (Bucur). 2013;108(5):719-724

Liver Transplantation in a Patient with Unresectable Colorectal Liver Metastases – A Case Report

D. Hrehoreț[1*], S. Alexandrescu[1*], V. Brașoveanu[1], R. Grigorie[1], C. Zielinski[2] , I. Popescu[1]
[1]"Dan Setlacec" Center of General Surgery and Liver Transplantation of Fundeni Clinical Institute Department of Surgery of University of Medicine and Pharmacy "Carol Davila", Bucharest, Romania
[2]Clinical Division of Oncology of the General Hospital Vienna; Department of Medicine of Medical University Vienna, Austria

Abstract

Background: Due to the lower survival rates achieved, in the early period of liver transplantation era, in patients with colorectal liver metastases, and because of the organ shortage, in the last two decades colorectal liver metastases are considered a contraindication for liver transplantation. However, the increasing number of marginal donors, and the improvements in posttransplant immunossuppresion, chemo-therapy and methods to assess the extrahepatic dissemination of colorectal cancer, opened the perspective of liver transplantation to certain patients with malignancies (such as HCC beyond Milan criteria, and selected patients with cholangiocarcinoma or liver metastases from neuroendocrine tumors). Since some of these patients experienced favorable outcomes, in the last years, there were authors that considered a rationale revisitation of the benefits of liver transplantation in patients with unresectable colorectal liver metastases. Thus, in 2006, a Norwegian group started a study which aims to assess the results of liver transplantation in patients with unresectable colorectal liver metastases. Their results were unexpectedly favorable, revealing that 5-year overall survival rate was 60%, and the quality of life was excellent in the first year following transplantation. However, all the patients presented relapse of the disease in the first two years following transplantation. In the present paper we present the clinico-pathologic characteristics, the pre- and postoperative management and the outcome of a patient with unresectable colorectal liver metastases who underwent liver transplantation in a very advanced state of the disease (when he developed subacute liver failure due to insufficient functional liver parenchyma and toxicity of chemo-therapy). We consider useful to present such observations, because collecting the data presented by different centers may be contributive to identification of a selected group of patients who could benefit from liver transplantation.

Case report: A 42-year old male patient, it was diagnosed with upper rectum cancer and multiple bilobar liver metastases in April 2009. Chemotherapy was started (in another hospital), and because the disease was stable after 7 cycles of FOLFOX and Bevacizumab, the patient was reffered to surgery (for a "two-stage" liver resection). In October 2009 it was performed primary tumor resection associated with left lateral sectionectomy and segment 4 metastasectomy. Because in November 2009 CT scan re-evaluation revealed progression of liver metastases, the second stage hepatectomy was precluded. Subsequent therapy consisted in radioembolization, multiple lines of chemotherapy, and targeted therapies. After more than 2 years, the liver metastases progressed and the patient developed progressive cholestatic subacute liver failure due to insufficient functional liver parenchyma and chemotherapy toxicity. In this state of the disease, he was admitted in our hospital, being dependant by liver dialysis and plasma exchange procedures. Due to the patients' age, and because the MDCT scan revealed the absence of extrahepatic disease (after almost three years of disease progression), and he could not benefited from any type of antineoplastic treatment due to progressive cholestatic sub-acute liver failure, liver transplantation with an organ from a marginal donor was considered and performed in January 2012. The postoperative course was uneventful, and the quality of his life improved (being fully reinserted social and professional). The immunosuppressive regimen consisted in Sirolimus and Mycophenolate mofetil, and the adjuvant chemotherapy started two months following liver transplantation. However, the patient developed

extrahepatic relapse of the disease (lung metastases and retroperitoneal recurrence), but now, at more than 20 months following transplantation, he is still alive in a good clinical condition.
Conclusions: In patients with multiple unresectable liver only colorectal metastases, liver transplantation may improve overall survival and quality of life, by using marginal grafts which cannot be allocated to the patients with standard indications for liver transplantation. The advent of MDCT and PET/CT scan and the use of m-TOR inhibitors may improve the results achieved by liver transplantation in patients with CLMs. Further studies could be useful in an attempt to disclose whether a selected group of patients with unresectable liver only colorectal metastases could become acceptable candidates for liver transplantation.
Key words: colorectal liver metastases, unresectable, liver transplantation, liver failure, extended criteria donors

Corresponding author: Irinel Popescu, MD, PhD, FACS, FEBS
Professor of Surgery, Director
"Dan Setlacec" Center of General Surgery and Liver Transplantation
Fundeni Clinical Institute
Sos. Fundeni, no. 258, sector 2, Bucharest, Romania
E-mail: irinel.popescu220@gmail.com