

REVIEW

Liver transplantation for colorectal liver metastases: revisiting the concept

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Summary

Liver transplantation (Lt) for colorectal cancer (CRC) liver metastases is no more considered due to the poor outcome observed up to the 1990s. According to the European Liver Transplant Registry (ELTR), 1- and 5-year patient survival following Lt for CRC liver metastases performed prior to 1995 was 62% and 18%, respectively. However, 44% of graft loss or patient deaths were not related to tumor recurrence. Over the last 20 years there has been dramatic progress in patient survival after Lt, thus it could be anticipated that survival after Lt for CRC secondaries today would exceed from far, the outcome of the past experience. By utilizing new imaging techniques for proper patient selection, modern chemotherapy and aggressive multimodal treatment against metastases, long term survivors and even cure could be expected. Preliminary data from a pilot study show an overall survival rate of 94% after a median follow up of 25 months. While long term survival after the first Lt is 80% all indications confounded, 5-year survival after repeat Lt is no more than 50% to 55%. If patients transplanted for CRC secondaries can reach the latter survival rate, it could be difficult to discriminate them in the liver allocation system and live donation could be an option.

Introduction

Liver transplantation (Lt) for malignant diseases is feasible and induces excellent outcome in selected patients. Lt for malignant tumors comprises 14% of all Lt's in the European Liver Transplant Registry (ELTR) [1]. It is currently a treatment option for patients with primary carcinomas of the liver and liver metastases from endocrine tumors. Types of primary liver carcinomas eligible for transplantation include hepatocellular carcinoma (HCC), cholangiocarcinoma (CCA), hepatoblastoma, and heman-gioendothelioma [2–4]. The most common secondary carcinomas that are considered for Lt include metastases from carcinoid tumors, neuroendocrine tumors and gastrinomas [2].

Lt for HCC within Milan- and the Up to Seven criteria show excellent short- and long term patient survival [4,5]. In recent studies of Lt for HCC even better results can be obtained in patients receiving immunosuppression containing the antiproliferative agent sirolimus [6,7]. In patients transplanted for cholangiocarcinoma using a multimodal approach with neoadjuvant radiation and chemotherapy a 5-year overall survival above 80% can be achieved in selected patients, compared to a corresponding 21% 5-year survival after liver resection [8].

Prior to 1995 several Lts for colorectal liver metastases were performed. However, the outcome of these transplantations were considered as poor and consequently, Lt for tumors of colorectal origin was abandoned. The aim of this paper is to review the past experience of Lt for