Recurrent hepatocellular carcinoma in liver transplant recipients: parameters affecting time to recurrence, treatment options and survival in the sorafenib era

Tulio EF Pfiffer¹, Daniel Seehofer², Annett Nicolaou¹, Ruth Neuhaus², Hanno Riess¹, and Ralf U Trappe¹

¹Department of Hematology, Oncology and Tumor Immunology, and ²Department of General, Visceral and Transplantation Surgery, Charité – Universitätsmedizin Berlin, Campus Virchow-Klinikum, Berlin, Germany

ABSTRACT

Background. A growing number of patients with hepatocellular carcinoma undergo liver transplantation, but there is little data on recurrence and its treatment in the posttransplant setting.

Methods. This article presents a retrospective analysis of adult hepatocellular carcinoma patients. The aim of the study was to characterize the clinical pattern of post-transplant hepatocellular carcinoma recurrence, treatment options in recurrence and overall survival after liver transplantation and after recurrence.

Results. A total of 139 patients with histological proven hepatocellular carcinoma was included in the study. The median follow-up after liver transplantation was 37.2 months. Twenty-four of 139 patients experienced a recurrence. In 72.7% of the cases, the hepatocellular carcinoma recurred outside the transplant. Median overall survival after recurrence was 23.1 months. A total of 68.2% of patients received a mean of 2.2 treatments for posttransplant hepatocellular carcinoma recurrence. While on treatment with sorafenib, the use of mTOR inhibitors and radiotherapy had no statistically significant effect on overall survival, complete surgical resection of metastatic lesions significantly improved overall survival. Non-resectable patients with isolated hepatic relapse also benefited from local control strategies.

Conclusions. Posttransplant hepatocellular carcinoma recurrence frequently is located outside the transplant, and despite the proven efficacy of sorafenib, complete surgical resection of metastatic lesions remains the hallmark of treatment.

Key words: hepatic-arterial infusion, hepatocellular carcinoma, liver transplantation, metastasectomy, sorafenib.

Acknowledgments: Editorial support was provided by Nature Publishing Group Language Editing. This support was funded by the German Study Group on Posttransplant Lymphoproliferative Disorders (DPTLDSG).

Correspondence to: Prof Dr med Hanno Riess, Charité – Universitätsmedizin Berlin, Campus Virchow Klinikum, Medizinische Klinik mit Schwerpunkt Hämatologie, Onkologie und Tumorimmunologie, Augustenburger Platz 1, 13353 Berlin, Germany. Tel +49-(0)30-450553013; fax +49-(0)30-450553901; e-mail hanno.riess@charite.de

Received December 8, 2010; accepted March 31, 2011