



UNIVERSITÀ
DEGLI STUDI
FIRENZE

FLORE

Repository istituzionale dell'Università degli Studi di Firenze

Liver transplantation for hepatocellular carcinoma with allografts from donors after circulatory death: Is the tumor recurrence

Questa è la Versione finale referata (Post print/Accepted manuscript) della seguente pubblicazione:

Original Citation:

Liver transplantation for hepatocellular carcinoma with allografts from donors after circulatory death: Is the tumor recurrence genuinely increased? / Mergental H.; Eldeen F.Z.; Muiesan P.; Mirza D.. - In: LIVER TRANSPLANTATION. - ISSN 1527-6465. - ELETTRONICO. - 20:(2014), pp. 495-495. [10.1002/lt.23841]

Availability:

The webpage <https://hdl.handle.net/2158/1200020> of the repository was last updated on 2020-07-07T08:35:08Z

Published version:

DOI: 10.1002/lt.23841

Terms of use:

Open Access

La pubblicazione è resa disponibile sotto le norme e i termini della licenza di deposito, secondo quanto stabilito dalla Policy per l'accesso aperto dell'Università degli Studi di Firenze (<https://www.sba.unifi.it/upload/policy-oa-2016-1.pdf>)

Publisher copyright claim:

La data sopra indicata si riferisce all'ultimo aggiornamento della scheda del Repository FloRe - The above-mentioned date refers to the last update of the record in the Institutional Repository FloRe

(Article begins on next page)

Liver Transplantation for Hepatocellular Carcinoma with Allografts from Donors after Circulatory Death: Is the Tumor Recurrence Genuinely Increased?

Received December 6, 2013; accepted January 9, 2014.

TO THE EDITORS:

We read with interest the article entitled "Inferior Survival in Liver Transplant Recipients With Hepatocellular Carcinoma Receiving Donation After Cardiac Death Liver Allografts" by Croome et al.,¹ which was published in the November 2013 issue of *Liver Transplantation*.

The authors analyzed results from the North American Scientific Registry of Transplant Recipients database (collected between January 1995 and October 2011) and observed inferior outcomes for recipients with hepatocellular carcinoma (HCC) who received donation after circulatory death (DCD) grafts. Croome et al.¹ hypothesized that more severe ischemia/reperfusion injury to DCD grafts might promote HCC growth and increase HCC relapse rates. Because the outcomes of the HCC-DCD patient group were inferior to those of the other patient groups, the authors concluded that this was related to HCC recurrence.

The major flaw of the study, however, is that the data about tumor recurrence were not collected in the Scientific Registry of Transplant Recipients database.

In our opinion and in contrast to the authors' conclusion, we believe that the presented data suggest that HCC recurrence is not affected by the liver graft type. The Kaplan-Meier survival estimates provided in Fig. 1 show an early posttransplant mortality rate for HCC-DCD recipients as high as 15%, and the remaining deaths occurred within the first 6 months after transplantation. This pattern is likely to be related to inferior graft quality and its related posttransplant complications.²

HCC-related deaths generally occur beyond 12 months.³ In the present study, during further follow-up, the survival curves for the non-HCC-DCD group, the HCC-donation after brain death (DBD) group, and the HCC-DCD group are parallel, and this is confirmed by data in Table 3. The differences between the 1- and 5-year survival rates are basically the same for the HCC-DBD and HCC-DCD groups (20.5% and 20.1%, respec-

tively) despite the significantly higher alpha-fetoprotein levels in the HCC-DCD group (alpha-fetoprotein level > 400 ng/mL: 12% versus 6%, $P = 0.006$).

Patients undergoing transplantation for HCC have well-preserved liver function and are frequently matched with extended criteria grafts. The interaction between HCC and DCD grafts described by the authors probably reflects this practice rather than different HCC behavior in these livers.

In conclusion, the present study confirms higher rates of early posttransplant mortality for DCD graft recipients with HCC. However, we believe that the data do not prove an increased incidence of HCC recurrence, and in this respect, the authors' conclusion should be taken with caution.

Hynek Mergental, M.D., Ph.D.

Firas Zahr Eldeen, M.D.

Paolo Muiesan, M.D., F.R.C.S.

Darius Mirza, M.S., F.R.C.S.

Liver Unit

Queen Elizabeth Hospital

University Hospitals Birmingham

Birmingham, United Kingdom

REFERENCES

1. Croome KP, Wall W, Chandok N, Beck G, Marotta P, Hernandez-Alejandro R. Inferior survival in liver transplant recipients with hepatocellular carcinoma receiving donation after cardiac death liver allografts. *Liver Transpl* 2013;19:1214-1223.
2. Burroughs AK, Sabin CA, Rolles K, Delvart V, Karam V, Buckels J, et al.; for European Liver Transplant Association. 3-month and 12-month mortality after first liver transplant in adults in Europe: predictive models for outcome. *Lancet* 2006;367:225-232.
3. Mazzaferro V, Llovet JM, Miceli R, Bhoori S, Schiavo M, Mariani L, et al.; for Metroticket Investigator Study Group. Predicting survival after liver transplantation in patients with hepatocellular carcinoma beyond the Milan criteria: a retrospective, exploratory analysis. *Lancet Oncol* 2009;10:35-43.

Address reprint requests to Hynek Mergental, M.D., Ph.D., Liver Unit, Queen Elizabeth Hospital, University Hospitals Birmingham, Birmingham, United Kingdom. Telephone: +44 121 371 4638; FAX: +44 121 414 1833; E-mail: hynek.mergental@uhb.nhs.uk

DOI 10.1002/lt.23841

View this article online at wileyonlinelibrary.com.

LIVER TRANSPLANTATION. DOI 10.1002/lt. Published on behalf of the American Association for the Study of Liver Diseases