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Recurrence of hepatocellular carcinoma after liver transplantation: Prognostic and predictive factors of survival in a Latin American cohort

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Abstract

Background & aim: Recurrence of hepatocellular carcinoma (HCC) after liver transplantation (LT) has a poor prognosis, and the adjusted effect of different treatments on post-recurrence survival (PRS) has not been well defined. This study aims to evaluate prognostic and predictive variables associated with PRS.

Methods: This Latin American multicenter retrospective cohort study included HCC patients who underwent LT between the years 2005-2018. We evaluated the effect of baseline characteristics at time of HCC recurrence diagnosis and PRS (Cox regression analysis). Early recurrences were those occurring within 12 months of LT. To evaluate the adjusted treatment effect for HCC recurrence, a propensity score matching analysis was performed to assess the probability of having received any specific treatment for recurrence.

Results: From a total of 1085 transplanted HCC patients, the cumulative incidence of recurrence was 16.6% (CI 13.5-20.3), with median time to recurrence of 13.0 months (IQR 6.0-26.0). Factors independently associated with PRS were early recurrence (47.6%), treatment with sorafenib and surgery/trans-arterial chemoembolization (TACE). Patients who underwent any treatment presented "early recurrences" less frequently, and more extrahepatic metastasis. This unbalanced distribution was included in the propensity score matching, with correct calibration and discrimination (receiving operator curve of 0.81 [CI 0.72;0.88]). After matching, the adjusted effect on PRS for any treatment was HR of 0.2 (0.10;0.33); P < .0001, for sorafenib therapy HR of 0.4 (0.27;0.77); P = .003, and for surgery/TACE HR of 0.4 (0.18;0.78); P = .009.

Conclusion: Although early recurrence was associated with worse outcome, even in this population, systemic or locoregional treatments were associated with better PRS.

Trial registration: ClinicalTrials.gov NCT03775863.

Keywords: hepatocellular carcinoma; liver transplantation; prognosis; recurrence; treatment.

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