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A strategy for the simultaneous provision of pre-operative palliative care for patients awaiting liver transplantation

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Dear Editors:

Patients with end-stage liver disease (ESLD) often pursue disease-directed therapies (DDT) or so-called curative efforts until the end of life (EOL). Palliative care (PC) or hospice care is either never provided or provided only when hope of liver transplantation (LT) is lost in the last week or two of life. The result can be poor quality of life (QOL) and poor quality of care (QOC) [1].

In general, hospice eligibility requires that patients must have a prognosis for survival of less than 6 months, but conventional prognostic criteria to predict 6-month survival in patients with ESLD have not been accurate [2].

The introduction of the model for end-stage liver disease (MELD) score in LT in the USA has improved the ability to predict which patients are most likely to die from ESLD and has been adopted by the United Network for Organ Sharing (UNOS) to determine priorities in allocating organs [3]. Early patient and graft survival 1 year after implementation of this organ allocation policy has not changed, while a significant reduction in waiting list mortality has been observed [4]. Therefore, the MELD score could be used as an indicator of concurrent hepatic transplantation prioritization and hospice referral.

We applied this new concept of simultaneous pre-liver transplant and hospice care to our patient population and, in this report, we describe a patient who received a liver transplant while under the concomitant care of the transplant and the palliative care teams.

A blood-type O, 50-year-old man with ESLD secondary to hepatitis C was listed for liver transplantation at the University of California Davis Medical Center (UCDMC) in October 2001. His liver disease was complicated by ascites and hepatic encephalopathy. He was also suffering from depression. At the time of listing, his Child–Turcotte–Pugh score was 7, his MELD score was 6, and his expected waiting time at our institution was about 2 years. During the following months he developed worsening encephalopathy (including coma stage), spontaneous bacterial peritonitis, endocarditis, and hyponatremia requiring multiple admissions to the hospital. Eight months after listing, when his MELD score had reached 17, the patient and his family were approached by the treating hepatologists and the UCDMC hospice team to discuss EOL medical and emotional needs. The patient agreed to enter the hospice program while receiving concomitant standard liver-directed support therapy from the transplant team. Hospice care included nursing visits, social work and chaplaincy support, not only to the patient but also to his family. All

services were provided at the patient's home, as well as 24-h availability of an on-call nurse. In August 2002, after he had been in the hospice program for 2 months, a liver graft became available, hospice care was revoked and the patient successfully underwent transplantation. At that time his MELD score was 21. After an uneventful intra- and post-operative course, he was discharged home on post-operative day 8 and had a full recovery.

This case illustrates a new strategy for simultaneous provision of PC and DDT while a patient is waiting for LT. In general, a sequential approach is used: PC or hospice care is offered to patients and their families only after patients are removed from the transplant list because of severity of disease and poor chance of survival. That event is often associated with withdrawal of specialty care and death within days, without a chance for EOL care to be optimized.

The reasons for such a sequential approach from DDT to PC include regulatory, patient and family barriers, and physician reluctance to discuss both goals simultaneously. In order for the impact of QOL and QOC to be determined, new models to improve access to PC to chronically ill patients are under investigation [5].

Patients at the top of the LT list have the greatest need for close monitoring as well as preparation for EOL, and the burden of care can be very heavy. Patients suffer from recurrent complications of ESLD and require repeated admissions.

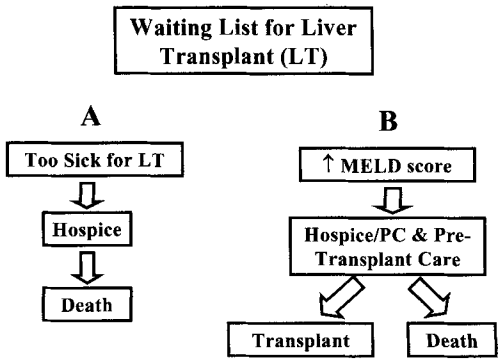

Fig. 1a,b The new model of integration between hospice/palliative care and liver transplantation: moving away from the sequential model (**A**) to simultaneous provision of care (**B**). This will allow expanded access to palliative and EOL care, as guided by the MELD score, while the patients and their families are still waiting for transplant

The management of their medication and nutrition become very challenging.

The combined team approach, between the PC and the transplant teams, has the potential to improve QOL and satisfaction of patients and their families. Simultaneous provision of specialty care and home-based primary care in ESLD patients could also improve care-giver QOL and reduce care-giver burden as well as hospital readmissions, as suggested by a Department of Veterans' Affairs Cooperative Study Group in a different setting [6].

Patients with ESLD waiting for transplant should consider advance care planning, to allow their family and the palliative care team to share the complexity of treatment in respecting the patients' attitude toward EOL. This process should be initiated early enough to allow full advantage in utilizing the resources available to family and patients [7].

The MELD score should be utilized to guide referral of patients with ESLD to PC or hospice (see Fig. 1). Future studies are needed to determine which MELD score value is the most appropriate to initiate the referral so that utilization of resources and benefit for patients and their families is maximized. The feasibility of the new concept of simultaneous provision of care to patients who require frequent hospitalizations and the logistics related to hospice resource utilization need to be further explored in a large clinical trial. In particular, it would be interesting to explore whether the costs of increased hospice services will be offset by a potential decrease in the frequency of repeated hospitalizations.

Keywords MELD score · End stage liver disease · Quality of care · End of life · Hospice

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