

INVITED COMMENTARY

Health-related quality of life in liver transplantation: another step forward

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In the field of liver transplantation (LT), satisfactory results have been achieved in recent years in terms of graft and patient survival, but improving patients' health-related quality of life (HRQoL) remains an issue.

It is well known that the HRQoL of patients with end-stage liver disease is impaired as a result of the life-threatening complications of portal hypertension, frequent hospitalizations, and limitations on their social life. They also have psychological issues, such as fear while awaiting a transplant, and worry about ongoing clinical deterioration in the meantime, often with a fall-out on caregivers and families too [1,2].

Soon after LT, most patients experience a better HRQoL, especially in the early postoperative period, when an over-reaction to their return to health would positively influence the levels of reported health status. In the longer-term follow-up, fluctuations in patients' perceived HRQoL are often associated with their ability to reach a new psycho-emotional stability, return to work, and regain their independence in activities of daily living.

Their HRQoL usually remains below the level of the general population, however. This is probably due partly

to psycho-social factors pertaining to patients' age, gender, social and cultural behavior, and social integration [3,4], and partly to physical factors relating to their medical history, post-LT complications, recurrent liver disease and/or effects of medication.

Previous findings on HRQoL in LT recipients are difficult to compare because the tools used to obtain them are not tailored to the LT setting and therefore fail to explore aspects typical of long-term solid organ transplant care [5].

In this issue of *Transplant International*, McLean *et al.* [6] tried to answer these open questions, evaluating HRQoL in 102 outpatient candidates for LT and 352 LT recipients, in two distinct periods. The Short-Form of the Liver Disease QoL (SF-LDQOL) questionnaire, which includes 36 items concerning nine different domains [7], was administered to both LT candidates and LT recipients. Only a few patients (11.6%) completed the questionnaire twice, and only 11 (2.4%) did so before and after LT. To overcome these biases and balance variables, the Authors compared pre- and post-LT cohorts using propensity score matching. The overall average treatment effect was considered as the estimated

average effect of LT on the HRQoL of the cohort as a whole. As expected, overall HRQoL improved significantly after LT, with an average treatment effect of 6.3 (95% CI 2.1–10.9). There were significant improvements attributable to LT in all physical and psychological domains, except for cognition.

Some comments are warranted on the study's findings.

First, the proportion of missing answers in the questionnaires was surprisingly high for several items dealing with everyday life and sexual function, which is a very important, often forgotten, parameter for the evaluation of post-LT HRQoL [8]. This suggests that more efforts are needed to make our patients feel more comfortable about themselves by offering them education on their disease symptoms and psychological counseling.

Second, the gain in HRQoL remained poor for some domains, such as social stigma. This problem is common among end-stage liver disease patients, as the disease strongly interferes with their self-image and social relationships, leading to adverse health-related behavior. When LT *per se* is unable to solve this problem, patients should be encouraged to return to work, and to their social life. Employment after LT is a marker of functional status after surgery and it has been associated with a gain in HRQoL. An individualized approach is undoubtedly needed, taking into account patients' social and cultural behavior, self-perception, and disease history.

Overall HRQoL remained consistent over time after LT in the study by McLean *et al.* [6], but the follow-up (4.3 years) was probably too short. Several studies on long-term survivors after LT have suggested that a gap persists between their HRQoL and that of the age-matched general population, especially in physical domains [9]. An early, aggressive prevention of modifiable risk factors for organ loss and metabolic complications, relying on a multidimensional approach and improving adherence, should be the key in this setting [10].

In conclusion, HRQoL is still a crucial issue in the field of LT and a challenge for the near future as LT recipients grow older and more frail because of comorbidities, and marginal grafts become increasingly common. We need to see HRQoL as a goal to be pursued early after LT, and continue to focus on it in the longer term. We must always remind ourselves that our work is not only about how long our patients live, but also how well.

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