



Liver transplantation in HIV/HBV coinfected patients: a cohort study

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Background

Prognosis of HIV-infected patients undergoing liver transplantation (LT) for hepatitis B virus (HBV)-related cirrhosis has been reported as satisfactory. However, this contention is based on reports generally including small series of patients without control groups and short follow-up.

Objectives

This study aims to determine patient and graft survival rates of HIV-infected patients who underwent LT for HBV-related cirrhosis and compare them with those observed in their counterparts without HIV infection.

Methods

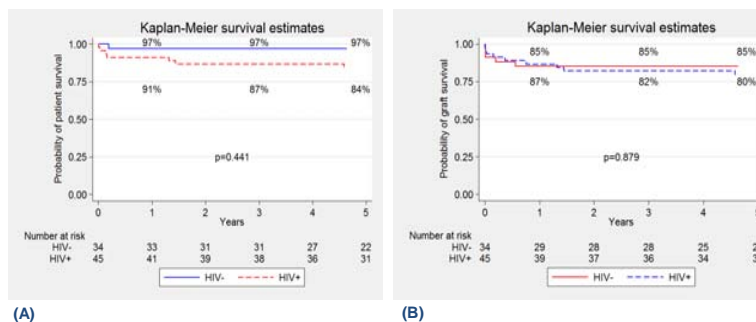
271 consecutive HIV-infected patients who underwent LT between 2002 and 2012 and who were followed until December 2014 were matched with 813 LT recipients without HIV infection in 22 Spanish institutions. Matched criteria were: same site, age (± 12 years), gender, calendar year, and LT indication. Those patients who underwent LT for HBV-related cirrhosis constitute the present study cohort.

Table 1. Characteristics of HBV-infected liver transplant recipients according to HIV-infection status

	HIV- n=34	HIV+ n=45	p-value
Pre-transplant variables			
Age (years) (1-unit increase)*	51 (43;55)	44 (40;47)	0.001
Male gender, n (%)	29 (85)	36 (80)	0.542
HCV/HBV cirrhosis as LT indication, n (%)	12 (35)	37 (82)	<0.001
HCV genotype 1, n (%)	6 (75)	12 (67)	0.671
Detectable serum HCV RNA at LT, n (%)	8 (67)	17 (46)	0.212
HDV infection	4 (20)	18 (60)	0.005
Hepatocellular carcinoma, n (%)	18 (53)	16 (36)	0.122
MELD score at enlisting*	13 (9;18)	13 (10;17)	0.518
MELD score at LT*	13 (10;19)	13 (10;19)	0.414
Time on waiting list (months)*	4.1 (3.0-5.2)	4.5 (2.0-7.3)	0.940
Peri-transplant variables			
Donor age (year) (1-unit increase)*	48 (46;50)	47 (31;64)	0.822
Length of follow-up (years)	5.9 (4.1;7.1)	6.5 (4.5;8.4)	0.513
Initial immunosuppressive regimen, n (%)			
- Tacrolimus-based	22 (65)	31 (70)	0.695
- Cyclosporine-based	12 (35)	13 (29)	0.544
Post-transplant variables			
Acute rejection, n (%)	5 (15)	14 (31)	0.091
FCH			
Anti-HCV treatment after LT, n (%)	5 (10)	10 (22)	0.399
SVR to anti-HCV treatment, n (%)	2 (6)	4 (9)	0.695
Re-transplantation, n (%)	4 (12)	4 (9)	0.720

*Median and interquartile range; LT, Liver transplantation

Figure 1: Five-year patient (A) and graft (B) survival



Results

- 45 HIV/HBV-coinfected LT recipients and 34 (17%) HBV-infected patients without HIV infection were included. **Table 1** shows characteristics of both groups.
- Figure 1** shows patient and graft survival rates according to HIV status at 1, 3, and 5 years.
- After a median of 5.8 (IRQ: 3.3-7.5) years of follow-up, 9 (20%) HIV-infected patients and 4(12%) non-HIV infected patients died. **Table 2** shows causes of death for both groups.
- No predictors of mortality were identified in the univariate analysis (data not shown).

Table 2. Causes of Death

	HIV- / HIV+		Causes of death over time for the whole cohort (HIV+ and HIV- recipients)		
	N (%)	N (%)	1st year	2-5 years	6-10 years
Mortality, n (%)	4 (12)	9 (20)	5	4	4
Cause of death, n (%)					
- Recurrence of HCV infection	-	2 (4)	1	1	
- de novo tumor	1 (3)	1 (2)			2
- Rejection	-	2 (4)		2	
- Surgical complications	-	2 (4)	2		
- Recurrence of HCC	1 (3)	-			1
- Multiple organ failure/sepsis	1 (3)	1 (2)	2		
- Unknown	1 (3)	1		1	1

Conclusions

HIV-infected patients undergoing LT for HBV-related cirrhosis have patient and graft survival rates similar to those patients without HIV infection.

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