

THE IMPACT OF RENAL DISEASE IN LIVER TRANSPLANTATION

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INTRODUCTION AND AIMS

Orthotopic liver transplantation (OLT) has become the treatment of choice for advanced liver disease of almost any cause.

Improved outcomes among solid organ transplant recipients have contributed to the growth in the absolute number of patients with chronic kidney disease (CKD) in this group, and this complication significantly compromises patients outcome¹⁻³.

The aim of this study was to determine the incidence of acute and chronic renal disease, possible risk factors and the impact on the patient survival.

POPULATION AND METHODS

This was a retrospective study of 626 patients receiving 708 OLT, transplanted in our unit between September 1992 and March 2007.

Clinical data: age at transplantation, gender, weight, aetiology for hepatic failure, presence of diabetes mellitus, hypertension, hepatitis B and C infection, renal dysfunction pre transplant (RD pre), immunosuppression (ISS) and necessity for acute renal replacement therapy (RRT).

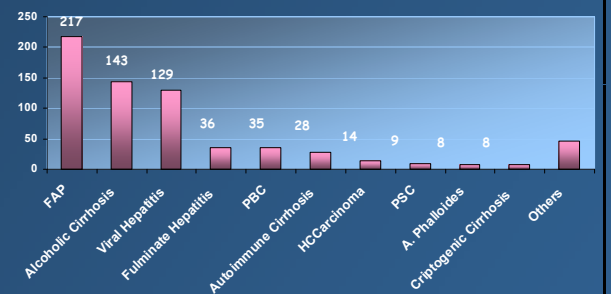
Laboratorial data: serum creatinine (Scr) values and/or glomerular filtration rate (GFR), determined by Cockcroft-Gault equation, at the last observation pre transplantation and at days 1, 7 and 21, month 6 and every year post transplantation.

RESULTS

708 OLT recipients:

- Male gender 64%
- Mean age: 44±12.6 years
- Diabetes in 106 patients (17%); Hypertension in 117 patients (18.8%)
- Mean follow up time 3.6 years, 29% > to 5 years
- Mean transplant survival: 75% at 12 months and 69% at 3 years
- RD pre (GFR_e < 60 ml/min or Scr > 1.5 mg/dl): 133 recipients (21.6%)
- Retransplanted: 82 recipients
- Death: 152 recipients

Indications for transplantation



AKI

n=213 (33.8%)

GFR_e ≤ 30% of pre transplant GFR

Scr ≥ 1.8 mg/dl

- ➔ RRT in 15.5% (n=34)
- ➔ Death in 30.5% (n=65)
- ➔ Renal recovery in 1.4% (n=3)

Linear Regression

	CI 95%	p	R ²
CKD stage 3	0.54 to 0.85	0.001	0.47
CKD stage 5d	0.03 to 0.3	0.02	
Re transplantation	0.003 to 0.17	0.04	
Mortality	0.01 to 0.17	0.02	

CKD

n=355 (50.2%)

Spearman Correlation

	r	p
Age	0.19	<0.001
Diabetes	0.88	0.003
Alcoholic Cirrhosis	0.09	0.015
RD pre	0.28	<0.0001
AKI post transplant	0.32	<0.0001
Mortality	0.19	<0.0001

Linear Regression

	CI 95%	p	R ²
Age	1.02 to 1.06	<0.001	0.19
RD pre	0.24 to 0.66	<0.001	
AKI post transplant	0.37 to 0.95	0.03	
Mortality	0.26 to 0.88	0.015	

MORTALITY

Linear Regression

	CI 95%	P	R ²
RD pre	0.01 to 0.14	0.02	0.18
AKI post transplant	0.06 to 0.26	<0.001	
CKD stage 5d	0.34 to 0.61	<0.001	

CONCLUSIONS

OLT are disposed to acute and chronic renal complications that have negative impact in the survival of these patients. Renal dysfunction seems to be more important than the need of re transplant in what concerns clinical prognostic.

References:

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