INTRODUCTION AND AIDS

Orthotopic liver transplantation (OLT) is an established treatment for patients with advanced cirrhosis, acute fulminant hepatitis and a therapeutic option for some resectable malignancies or metabolic diseases.

Acute renal failure (ARF) is a common complication of OLT and is associated with increased mortality. True incidence is not known, depending on criteria used to define ARF after OLT.

Recently a group of experts developed a set of criteria for definition and classifying ARF, publishing The RIFLE classification system. The aim of this study was to evaluate the prognostic value of RIFLE classification in OLT receptors.

PATIENTS AND METHODS

This was a retrospective, observational study of 626 receptors submitted to 708 OLT in our unit, between September 1992 and March 2007.

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

Laboratorial data considered was serum creatinine (Scr) and/or estimated glomerular filtration rate (eGFR) by Cockcroft-Gault equation depending on criteria used to define ARF after OLT.

Etiology of hepatic failure

Orthotopic liver transplant (OLT) is an established treatment for patients with advanced cirrhosis, acute fulminant hepatitis and a therapeutic option for some resectable malignancies or metabolic diseases.

RESULTS

626 patients received 708 OLT:
- Predominance of male gender (64%); Mean age 44±12.8 years
- Hypertension in 117 receptors (18.8%); diabetes in 106 (17.1%)
- Hepatitis B V infection in 3.8% and Hepatitis C V infection in 19.9%
- Mean follow up time 3.5 years, 29% having more than 5 years of fup
- Previous renal dysfunction (eGFR < 60 ml/min/Per >1.5 mg/dl) in 133 receptors (21%)
- 152 patients died

Mortality 23.5%

Risk
- 119 receptors Mortality 11.6%

Injury
- 60 receptors Mortality 11.3%

Failure
- 56 receptors Mortality 35%

According to RIFLE criteria

ARF n=235

- 16.8% R
- 8.5% I
- 7.9% F

Risk factor for CKD development (p<0.01)

No correlation with mortality or retransplant necessity

CKD

RRT 0.58 0.41 to 0.58 <0.001 0.19

RD pre (n = 133) 0.1 0.03

Spearman Correlation

F criteria

Linear Regression

β Cl 95% p R²

CKD stage 4 0.12 0.02 to 0.18 <0.001 0.19

CKD stage 3 0.33 0.13 to 0.24 <0.001 0.51

CKD stage 5d 0.23 0.19 to 0.41 <0.001

Mortality 23.5%

Risk
- 119 receptors Mortality 11.6%

Injury
- 60 receptors Mortality 11.3%

Failure
- 56 receptors Mortality 35%

CONCLUSIONS

ARF is a common complication in OLT and it has a severe prognostic influence in terms of patient survival.

RIFLE classification is a simple and a useful tool to stratify the severity of ARF according to the risk of developing renal dysfunction and risk of death.