ACUTE KIDNEY INJURY AFTER PROCEDURES OF ORTHOTOPIC LIVER TRANSPLANTATION: RISK FACTORS, RENAL OUTCOMES AND SURVIVAL.

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IIntroduction.

The incidence of acute renal injury (AKI) after orthotopic liver transplantation (OLT) ranges between 40 and 70%. The etiology of this syndrome is multifactorial.

Objetivo.

To describe the characteristics and possible factors associated with renal water damage in patients undergoing orthotopic liver transplantation

Methods.

Medical records of patients undergoing OLT in the period from January 2012 to August 2019 were reviewed. A total of 355 patients were included, 171 (%) patients presented AKI. Baseline characteristics, variables during surgery and variables during their stay in ICU were analyzed. Renal outcomes and survival were also analyzed.

Results.

Basal	Without AKI	With AKI	P value
Age (y)	46 ± 12	51 ± 11	0.001
Male (%)	37	54	0.001
Basal creatinine (mg/dl)	0.77 ± 0.36	0.88 ±0.36	0.003
Furosemide use (%)	52	72	0.001
Previous AKI (%)	17	35	0.001

During Surgery	Without AKI	With AKI	P value
Maximum Lactate mg/dl	5.1 ± 2.08	5.8 ±3.4	0.014
Norepinephrine dose (mg/kg/min)	0.34 ± 0.26	0.59 ± 0.73	0.001
Vasopressin use (%)	36	51	0.003
Ascites drained volume (ml)	1508 ± 2453	973 ± 1871	0.021
Anehepatic Period (min)	52.9 ±10.3	57.4 ± 22.4	0.014

ICU stay	Group without AKI	Group with AKI	P value
Liquid in the first 8 h	1319 ± 1217	1984 ± 1736	0.001
Liquid second 8 h	1208 ± 1061	1606 ±1344	0.001
Norepinephrine dose (mg/kg/min)	0.14 ± 0.14	0.27 ± 0.23	0.009
Surgical reintervetion (%)	3	10	0.05
Vancomicyn use (%)	27	42	0.02
Transfusions (%)	33	59	0.001

	without AKI	with AKI	P value
ICU length of stay	3.92 SD 4 ±	5.7 SD 6.8 ±	0.002
Creatinine mg/dl*	0.67 SD 0.21 ±	0.97 SD 0.46 ±	0.001
GFR ml/min*	104 SD 21.05 ±	86.6 SD 28.5 ±	0.00
30 day survival (%) *	95.5%	93.6%	0.02

*Discharge from the hospital

Renal support therapy

30 patients (8%) required renal support therapy during their stay in the ICU.

	Renal support therapy (n 30)	Without renal support therapy (n 141)	P value
Persistent CKD GFR (<60 ml/ min)	9.9 %	42%	0.001
Basal Cr value return	10.6 %	33%	0.001
Creatinine mg/dL*	1.5 SD 0.7 ±	0.75 ± 0.26	0.001
GFR ml/min*	59.8 ± 33.2	96.88 ±24.2	0.001

*Discharge from the hospital

CRRT was required in 12 of the 30 patients with AKI and renal support. Four patients required renal support during surgery.

Conclusions

The incidence of AKI in the first 7 days was 48%, which is consistent with that reported in the world literature. The development of AKI seems to be multifactorial influencing baseline characteristics of patients before transplantation and renal insults during surgery and intensive care stay. As reported in other series, AKI was associated with higher mortality at 7 and 30 days, in addition to lower GFR at patient discharge and higher risk of CKD.