

SCA 139

A COMPARISON OF INTRAOPERATIVE FLUID MANAGEMENT TECHNIQUES TARGETING LOW VS. NORMAL CENTRAL VENOUS PRESSURE (CVP) DURING ORTHOTOPIC LIVER TRANSPLANTATION (OLT)

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There are conflicting strategies concerning intraoperative fluid management and resuscitation during OLT, although both are guided by cardiopulmonary hemodynamics, blood loss, coagulation profile, and surgical exposure. One (Low-CVP) decreases blood loss by achieving a target CVP < 3 mm Hg via minimal fluid administration, and use of alpha-agonists and venodilators. Another, (Normal-CVP) maintains "normal" hemodynamics (pulmonary artery diastolic pressure: 12-15 mm Hg; mean arterial pressure: ~75 mm Hg) and minimises use of vasopressors. The outcomes associated with Low-CVP vs. Normal CVP techniques in OLT have not been previously examined. We hypothesized that Low-CVP decreases intraoperative blood utilization but at the cost of impairment of renal function.

The records of adult cadaveric OLT recipients of a Low-CVP and a Normal-CVP program were retrospectively reviewed for the period of 7/98 to 1/01. The immunosuppression regimen was tacrolimus and corticosteroids. Venovenobypass was used selectively (< 10%); octreotide and amikar/aprotinin were used routinely. The following data were examined: UNOS status (1, 2A, 2B, 3), piggyback vs. caval interposition surgical technique, intraoperative blood use, serum creatinine (preop and peak), incidence of postop hemodialysis, ICU and total length of stay (LOS), and mortality at

30-days post OLT. (Data are expressed as mean ± SEM. Statistical analysis performed using Students t-test or Chi square test, as appropriate; p values < 0.05 are considered significant.)

In conclusion, Normal CVP had more severely ill recipients and greater intraoperative blood utilization (>3 fold). Low-CVP was associated with significantly higher Peak Cr and increased 30-day patient mortality, but lower rates of transfusion. While potentially applicable to hepatic-resection surgery, the technique of Low-CVP should be used with caution in OLT.

	Low-CVP	Normal-CVP
# patients (n)	73	78
UNOS 1or 2A (n)	15	31*
2B	55	47*
3	3	0*
<i>OR technique:</i>		
Piggyback	38 (53%)	44 (56%)
Caval Interposition	35 (47%)	34 (44%)
Intraop PRBC(# units)	3.8 ± 0.7	11.6 ± 2.0**
<i>Creatinine (mg/dl)</i>		
Preop	1.2 ± 0.1	1.3 ± 0.1
Peak	3.2 ± 0.3#	1.8 ± 0.2**
Postop hemodialysis (%)	5 (6.8%)	1 (1.2%)
<i>LOS</i>		
ICU (days)	3.0 ± 0.7	2.1 ± 1.1
Total (days)	15.8 ± 2.4	14.0 ± 1.7
Patient death at 30-days	6 (8.2%)	0 @

*p=0.003 vs Low-CVP by Chi square; **p<0.01 vs Low CVP by t test; # p<0.05 vs Preop Cr; @ p<0.03 vs Low CVP by Chi square