EFFECTS OF INTRAOPERATIVE LIQUID AND RESTRICTIVE BLOOD TRANSFUSION MANAGEMENT TO HOSPITAL DISCHARGE IN HIGH RISK PATIENTS ON MAJOR ABDOMINAL SURGERY

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Background and Goal of Study:

Perioperative fluid and blood transfusion administrations are very important for hemodynamic stability, oxygen delivery and organ perfusion (1,2). The aim of this study is to evaluate intraoperative fluid resuscitation in patients who underwent high risk major abdominal surgery and to compare the mortality and morbidity of intraoperative restrictive blood transfusion versus liberal blood transfusion.

Materials and Methods:

Among three hundred and fifty-two ASA (American Society of Anesthesiologists) scores were III-V patients who have had elective major abdominal surgery between July 2014-July 2015,141 were included in the study. Patients were divided into two groups according to their blood transfusion management as "restrictive" (group R) and "liberal" (group L). Demographic data, preoperative, intraoperative, and postoperative complications, duration of hospitalization, intensive care unit stay, mortality and discharge rates were investigated.

Results and Discussion:

Demographic and preoperative data were similar in both groups (group L, n=49; and group R, n=92). However, the number of ASA IV patients in Group R was higher than Group L (p<0.005). Intraoperative data (preoperative and postoperative haemoglobin values, type of surgery, duration of operation, total amount of crystalloid and colloid, fresh frozen plasma and erythrocyte suspension counts) were similar in both groups and it was seen that Group L had more colloid transfusion than Group R. Postoperative complications, mortality/discharge ratio, duration of hospitalization and intensive care unit stay were similar in both groups. However, the rate of minor infections was 26.5% in Group L and 7.6% in Group R, which was statistically significantly higher (p = 0.002).

Conclusion(s):

In high-risk patients, restrictive blood transfusion strategies should be used due to the positive effects of morbidity, mortality, and discharge compared to liberal blood transfusion strategies without applying fluid-restricting protocols.

Table 1. Demografic variables

	Grup L (n=49)	Grup R (n=92)	<i>p</i>
Age (mean)	61,55±8,9	63,45±9,6	0.581
Gender			
M	63,3	69,6	0.447
F	36,7	30,4	
BMI (mean)	27,7±5,3	26,8±5,3	0.377
ASA (%)			0.002*
III	100	82,6	
IV	0	17,4	
V	0	0	
Smokers (%)			0.799
(+)	67,3	65,2	
(-)	32,7	34,8	
Alcohol use (%)			0.678
(+)	2	3,3	
(-)	98	96,7	
Preoperative cardiac disease (%)			0.506
(+)	10,2	14,1	
(-)	89,8	85,9	
DM			0.194
(+)	42,9	54,3	
(-)	53,1	45,7	
Preoperative neurological disorder (%)			0.941
(+)	4,1	4,3	
(-)	95,9	95,7	
RF (%)			0.201
(+)	0	3,3	
(-)	100	96,7	
COPD (%)			0.087
(+)	53,1	38	
(-)	46,9	62	

Table 3. Postoperative variables

	Grup L (n=49)	Grup R (n=92)	<i>p</i>
Minor infection (%)			0.002*
(+)	26,5	7,6	
(-)	73,5	92,4	
Major infection (%)			0.384
(+)	8,2	13	
(-)	91,8	87	
SVE (%)			1.000
(+)	0	0	
(-)	0	0	
MI (%)			0.464
(+)	0	1,1	
(-)	100	98,9	
DVT (%)			1.000
(+)	0	0	
(-)	0	0	
PE (%)			0.464
(+)	0	1,1	
(-)	100	98,9	
DIC (%)			1.000
(+)	0	0	
(-)	0	0	
RF (%)			0.464
(+)	0	1,1	
(-)	100	98,9	
Exitus (%)	6,1	4,8	0.735
Discharged (%)	93,9	95,2	
ICU time (day) (mean)	5,9±9,6	6,1±7,7	0.804
Hospital stay time (day) (mean)	11,4±7,3	14,5±10,9	0.074

Table 2. Intraoperative variables

	Grup L (n=49)	Grup R (n=92)	<i>p</i>
Operation (%)			0.636
-pancreas	36,7	29,3	
-hepatic/biliary	26,5	27,2	
-colorectal	36,7	43,5	
Preoperative Hb (gr.dL ⁻¹)(mean)	12,3±1,9	12,4±2,0	0.585
Postoperative Hb (gr.dL ⁻¹) (mean)	11,6±1,7	11,3±1,9	0.303
Intraoperative total crystalloid (mL) (mean)	2411,2±979,1	2316,3±1285,9	0.652
Intraoperative total verilen kolloid (mL) (mean)	515,3±474,3	359±315,2	0.021*
Intraoperative total FFP (Ü) (mean)	0,6±1,2	0,5±1,5	0.447
Intraoperative total ES (Ü) (mean)	0,6±0,9	0,5±1,0	0.588
Operation time (min) (mean)	279,2±104,4	307,2±159,1	0.268

References

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