

P-586

## Is Cell Saver Mandatory for Liver Transplantation? Report of 544 Liver Transplants Without Auto-transfusion

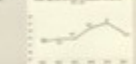
Atabak Najafi, SHA Dosh, Nasir Fakhri, Reza Sharif Moharrari, Jalil Makarem, Mahsen Nasiri Toudi

Hepatobiliary & Liver Transplant Research Center

Imam Khomeini Hospital Complex, Tehran University of Medical Sciences, Tehran, IR IRAN

### Introduction

Cell saver program was started in 2002 in our center, Imam Khomeini Hospital Complex, Tehran, Iran, affiliated to Tehran University of Medical Sciences. We used Cell Saver subsequently in the first 50 patients but no cell saver was used in 2012 when we did more than 50 liver transplants per year. The main reason for not using Cell Saver was unavailability of the sets. Another reason was the complications attributed to the mechanism of Red Blood Cells (RBCs) survival in the machine that may cause or aggravate coagulopathy. Mean age and mean MELD score of transplanted patients are as follows:



Indication for liver transplant are depicted below:



years starting technique in Cases) and 55 patients, work monitored and we have surgical

### Results

544 liver transplants were done from January 2012 to December 2017. Mean age of the patients was 44.48 years, 60 percent male and average MELD score of 21. The series include acute liver failure and acute on chronic liver failure.

Primary non-function and severe early dysfunction was significantly more common in group 2 and 4. Arterial thrombosis was also more common in group 4 and early mortality was increased in a linear correlation with transfusion from 9% in group 1 to 50% in group 4. Operative time was also directly correlated with the amount of blood transfusion, from 266 min. in group 1 to 373 in group 4.

#### Correlation Between The Amount of Blood Transfusion and PNF

Amount of Transfusion (ml)	1	25	50	75	100	P-value
PNF (%)	1	12	16	24	36	1.00
OR	1	12.00	16.00	24.00	36.00	

#### Correlation Between The Amount of Blood Transfusion and Early Arterial Thrombosis

Amount of Transfusion (ml)	1	25	50	75	100	P-value
Early Arterial Thrombosis (%)	1	12	16	24	36	1.00
OR	1	12.00	16.00	24.00	36.00	

#### Correlation of The Amount of Intraoperative Blood Transfusion (ml) and Patient Survival

Amount of Transfusion (ml)	1	25	50	75	100	P-value
Survival (%)	1	12	16	24	36	1.00
OR	1	12.00	16.00	24.00	36.00	

There was no significant correlation between the amount of blood transfusion and MELD score, early Portal vein thrombosis and Biliary complication.

#### Correlation Between The Amount of Blood Transfusion and MELD Score

Amount of Transfusion (ml)	1	25	50	75	100	P-value
MELD Score	1	12	16	24	36	1.00
OR	1	12.00	16.00	24.00	36.00	

#### Correlation Between The Amount of Blood Transfusion and Early Portal Vein Thrombosis

Amount of Transfusion (ml)	1	25	50	75	100	P-value
Early Portal Vein Thrombosis (%)	1	12	16	24	36	1.00
OR	1	12.00	16.00	24.00	36.00	

#### Correlation Between The Amount of Blood Transfusion and Biliary Complications

Amount of Transfusion (ml)	1	25	50	75	100	P-value
Biliary Complications (%)	1	12	16	24	36	1.00
OR	1	12.00	16.00	24.00	36.00	

### Conclusion

Although autotransfusion is a well-known substitute for allogeneic blood, there are pros and cons for using cell