

Category : **Renal: failure**

A185 - Influence of fluid therapy on kidney function in the early postoperative period after lung transplantation.

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Introduction:

Perioperative fluid therapy among patients undergoing lung transplantation (LT) has a significant clinical importance, including development of acute kidney injury (AKI). The development of AKI in the first days after LT is associated with increased mortality in the lung transplant recipients. The aim of the study was to analyze the relationship between the volume of infused fluids, the balances of crystalloids and colloids during LT surgery and in the first 24 hours and the eGFR values in the following days of the postoperative period.

Methods:

Retrospective data analysis of 73 patients undergoing lung transplantation in 2015-2018 in our institution. Exclusion criterium was absence of 7 days observation post LTx. Deterioration of renal function was defined as the change in eGFR that occurred between baseline eGFR and the first and seventh day of observation post-LT. The CKD-EPI formula was used to calculate the eGFR value.

Results:

The greatest decline of eGFR in the early postoperative period was demonstrated on day 7 ($\Delta eGFR = 75.76 \pm 40.08$). The decrease of eGFR on day 7 shows a weak, negative correlation both with the volume of infused colloids ($r = -0.195$, $p\text{-value} = 0.309$) and the volume of transfused blood products ($r = -0.189$, $p\text{-value} = 0.324$) during the procedure and the first day after operation. Negative crystalloid balance during the LT procedure and the first postoperative day is associated with a strong, negative correlation with decrease in eGFR on the 7th day post-LT ($r = -0.997$, $p\text{-value} < 0.05$)

Conclusion:

In the analyzed population, colloids and blood products transfusions did not affect the renal function in the early perioperative period. Negative crystalloid balances in early postoperative period post-LT has a potentially protective effect on kidney function.