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The Effects of Early Postoperative Thrombocytopenia at Intensive Care Unit Admission to Allograft Function and Outcomes after Liver Transplantation

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Introduction:

- Patients undergoing liver transplantation (LT) due to end stage liver diseases (ESLD)

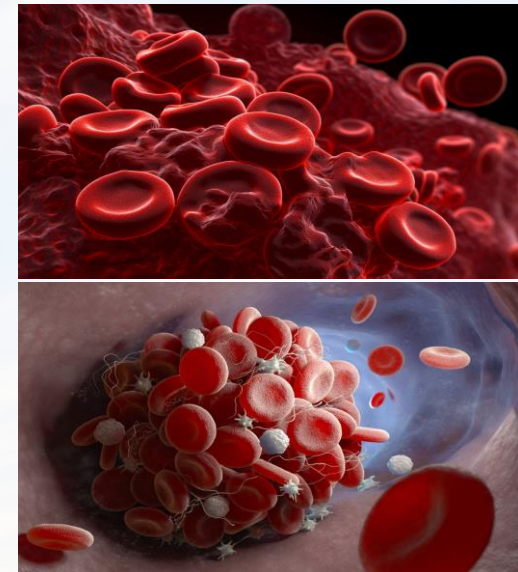


perioperative thrombocytopenia and coagulation abnormalities

- The role of platelets on the prognosis of patients with LT remains **unclear !!!**

- **Our aim:**

To investigate the effect of platelet count at early postoperative intensive care unit (ICU) admission on transfusion requirement, allograft function and outcomes among LT recipients



Material and Method:

- Retrospective
 - Medical records of LT recipients
 - Early postoperative period
 - January 2019 -January 2024
- Thrombocytopenia → platelet count $<150 \times 10^3 / \mu\text{L}$
 - 2 groups: early postoperative platelet count at ICU admission
 - $<150 \times 10^3 / \mu\text{L}$ → low platelet group (LPG)
 - $\geq 150 \times 10^3 / \mu\text{L}$ → high platelet group (HPG)



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Results:

- ❖ 113 patients underwent LT
- ❖ Excluded patients:
 - 13 → missing data
 - 3 → intraoperative platelet transfusion
- ❖ 97 patients were included



Total	100% (n = 97)	
Gender	Male: 57.7% (n = 56)	Female: 42.3% (n = 41)
Age group	Pediatric: 75.3%(n=73)	Adult: 24.7 (n=24)
Age	Mean age: 14.9 ± 20.1 years	
Donor type	Living donor: 91.8% (n=89)	Cadaveric: 8.2% (n=8)
Thrombocyte count	High platelet group (HPG): 27.8% (n=27)	Low platelet group (LPG): 72.2% (n=70)



Results:

	LPG	HPG
Delayed graft dysfunction (DGD)	15.7%	0%
Bile leakage	4	0
Portal vein bleeding	3	0
Hepatic artery thrombosis	58.3%	41.7%
Portal vein thrombosis	71.4%	28.6%
Revision surgeries	67.9%	32.1%
Endovascular interventions	71.9%	28.1%
Mortality	84.6%	15.4%



LPG received higher amounts of:

- PRBC, FFP, platelet, cryoprecipitate transfusion
- Vitamin K and tranexamic acid

On ICU discharge, the LPG had

- Lower platelet counts
- Higher total and conjugated bilirubin,
- Higher lactate levels and
- Higher SOFA scores



Conclusion:

Our study indicates :

- ✓ the incidence of thrombocytopenia is common among LT recipients during the early postoperative period
- ✓ Among LT recipients with thrombocytopenia

Transfusion requirements
Delayed graft function
Thrombotic and haemorrhagic events
Mortality



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