

Obstructive Shock from Intraoperative Thromboembolism During Liver Transplant: A Case of Low-Dose tPA Rescue

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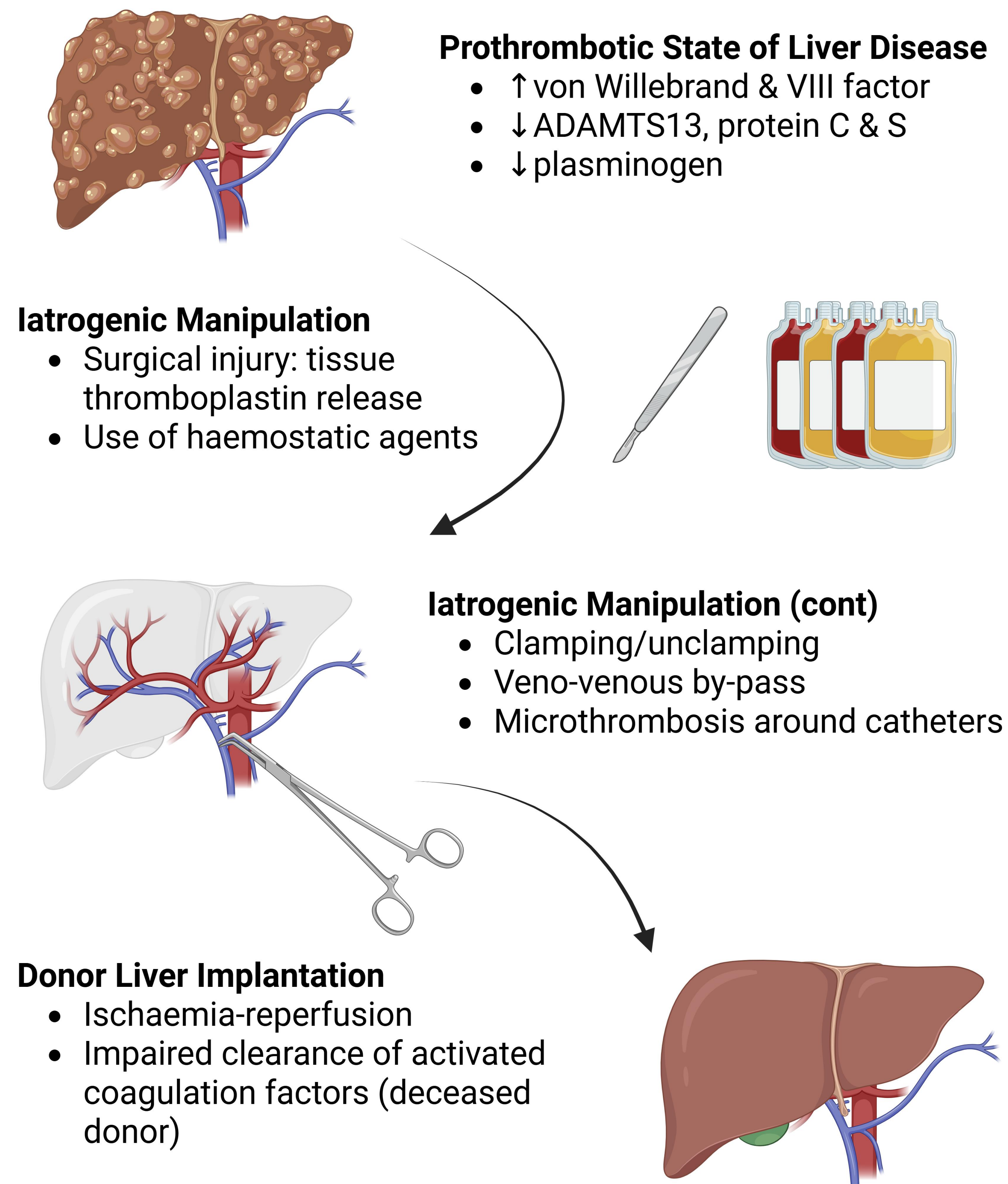
LEARNING OBJECTIVES

- Recognize thromboembolism-mediated obstructive shock during orthotopic liver transplantation (OLT).
- Understand etiology, diagnostic modalities, and management strategies.

CASE DESCRIPTION

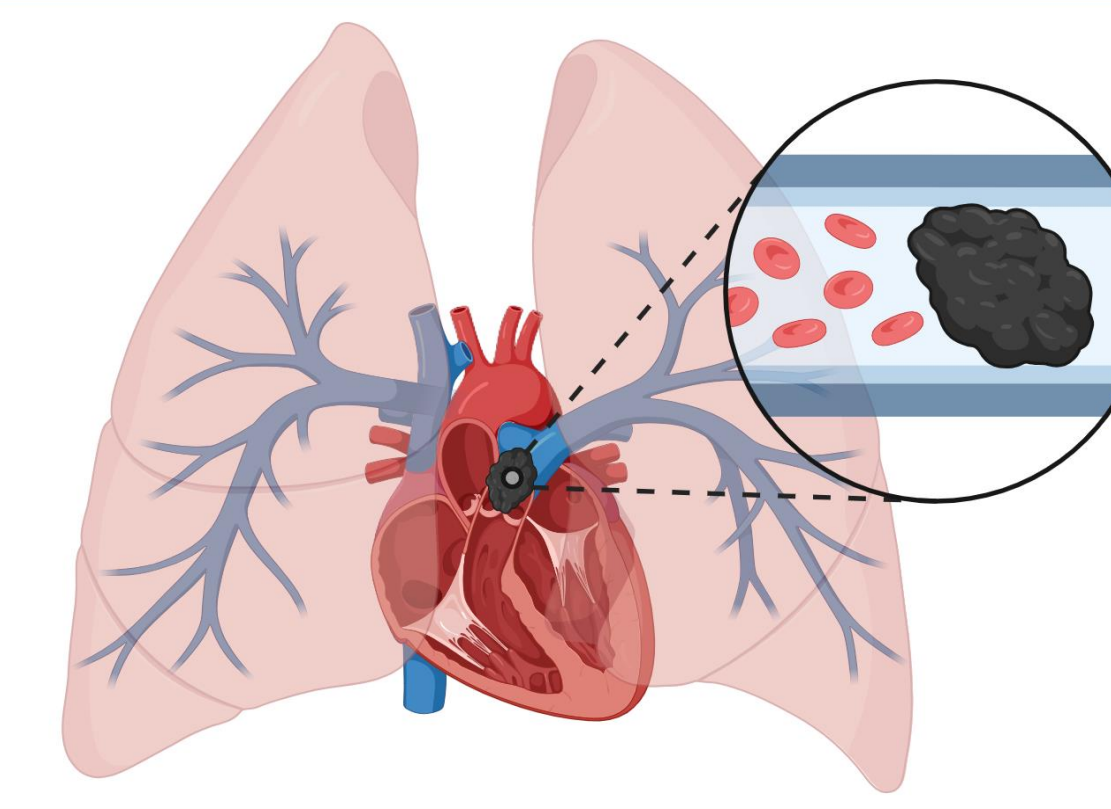
- 70-year-old male with MASLD → deceased donor OLT
- Portal vein reperfusion → severe bradycardia, hypotension, PEA arrest
- Management:
 - TEE: Large RA/RV thrombus, severe RV dysfunction
 - CPR + epinephrine → ROSC
 - Incomplete thrombus catheter aspiration → 1 mg intracardiac tPA via central line
 - Thrombus resolved; hemodynamics improved
- Post-tPA:
 - MTP, FFP, Cryo, TXA for bleeding
- Outcome: Off pressors & extubated within 48 h

PATHOPHYSIOLOGY AND MANAGEMENT



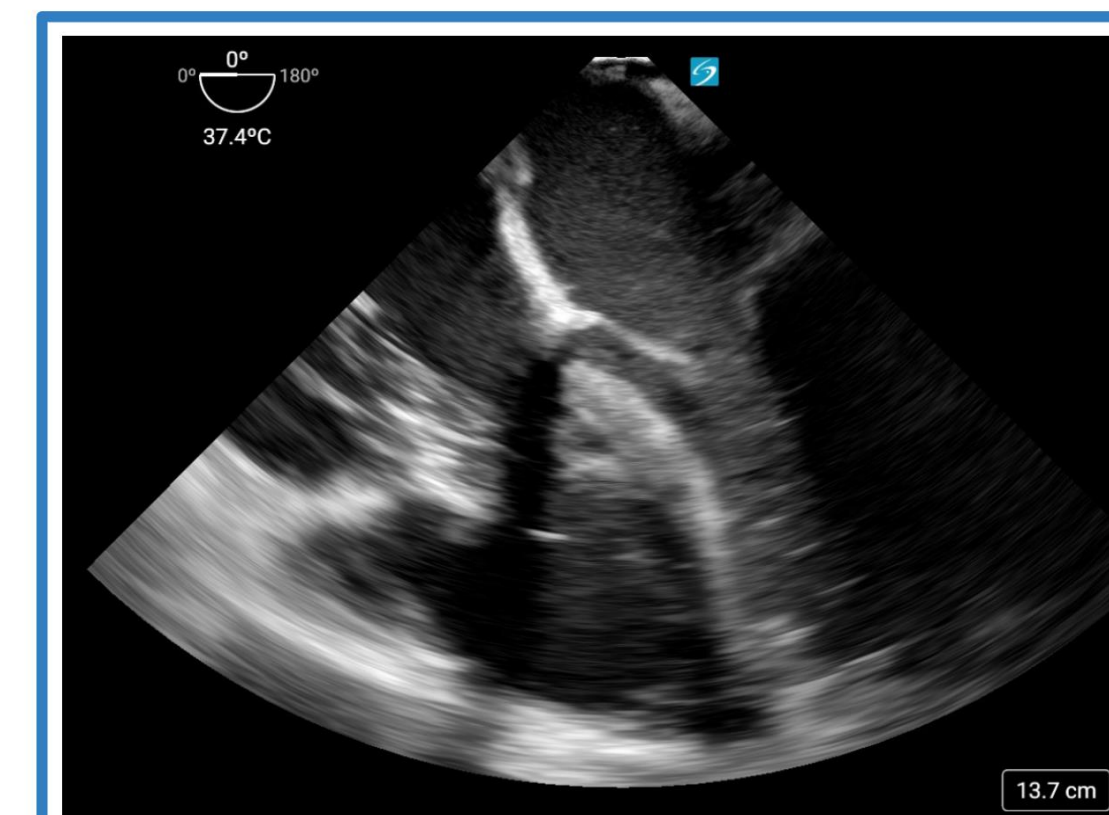
Recognition

- Hemodynamic instability
- Cardiac arrest (PEA)
- Hypoxemia
- Decrease in end-tidal CO₂



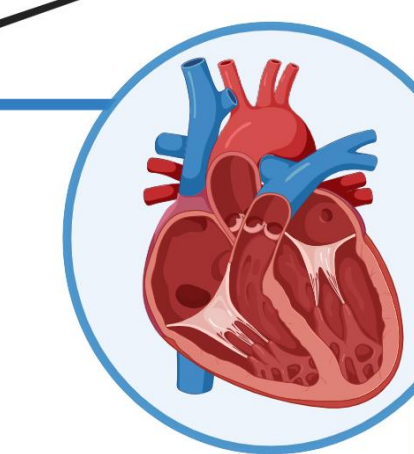
Diagnosis

- Transesophageal echo
- Pulmonary artery catheter



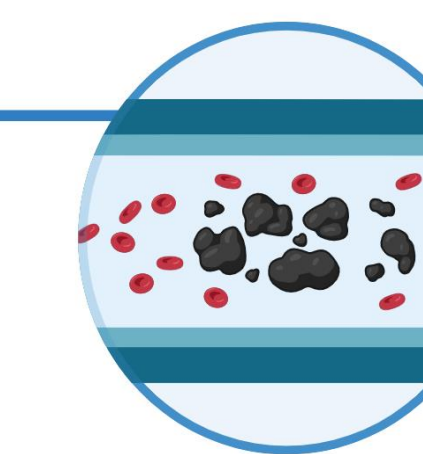
CV Support

- Inotropes
- Vasopressors
- IV fluids
- Inhaled nitric oxide
- ECMO



Reperfusion

- Anticoagulation
- Systemic thrombolysis
- Catheter therapies
- Surgical embolectomy



CONCLUSIONS

- Intraoperative pulmonary embolism can cause obstructive shock during OLT
- Immediate TEE assessment allows for rapid diagnosis
- Low-dose tPA may restore perfusion but carries substantial bleeding risk.
- Anticipate coagulopathy and early, aggressive hemostatic support

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