

Sequential Management of ACS, CABG, and TIPS Prior to Liver Transplantation Within 10 Days: A Case Report and Literature Review

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Patient Information:

- 44 year-old Male
- PMHx:
 - Coronary Artery Disease (2012 DES to LCX, 2017 DES x2 to LAD, 2024 DES to Proximal LAD and Balloon Angioplasty of mid LAD and RCA)
 - NSTEMI (January 2024)
 - Non-alcoholic steatohepatitis (NASH), Portal Vein Occlusion, Ulcerative Colitis, Hypertension, Hyperlipidemia, Type-2 Diabetes
- PSHx:
 - EGDs (with esophageal variceal banding)
- FMHx: Non-contributory
- Social Hx: Non-contributory

Case/Course Description:

- Presented from OSH with angina for coronary cath
- Severe 2v disease not amenable to PCI
- While awaiting CABG, had acute esophageal GI Bleed
- EGD w/ Banding (x2)
- TIPS performed to optimize prior to CABG
- Post-operative TIPS course complicated by NSTEMI
- CABG
- Living donor liver transplant

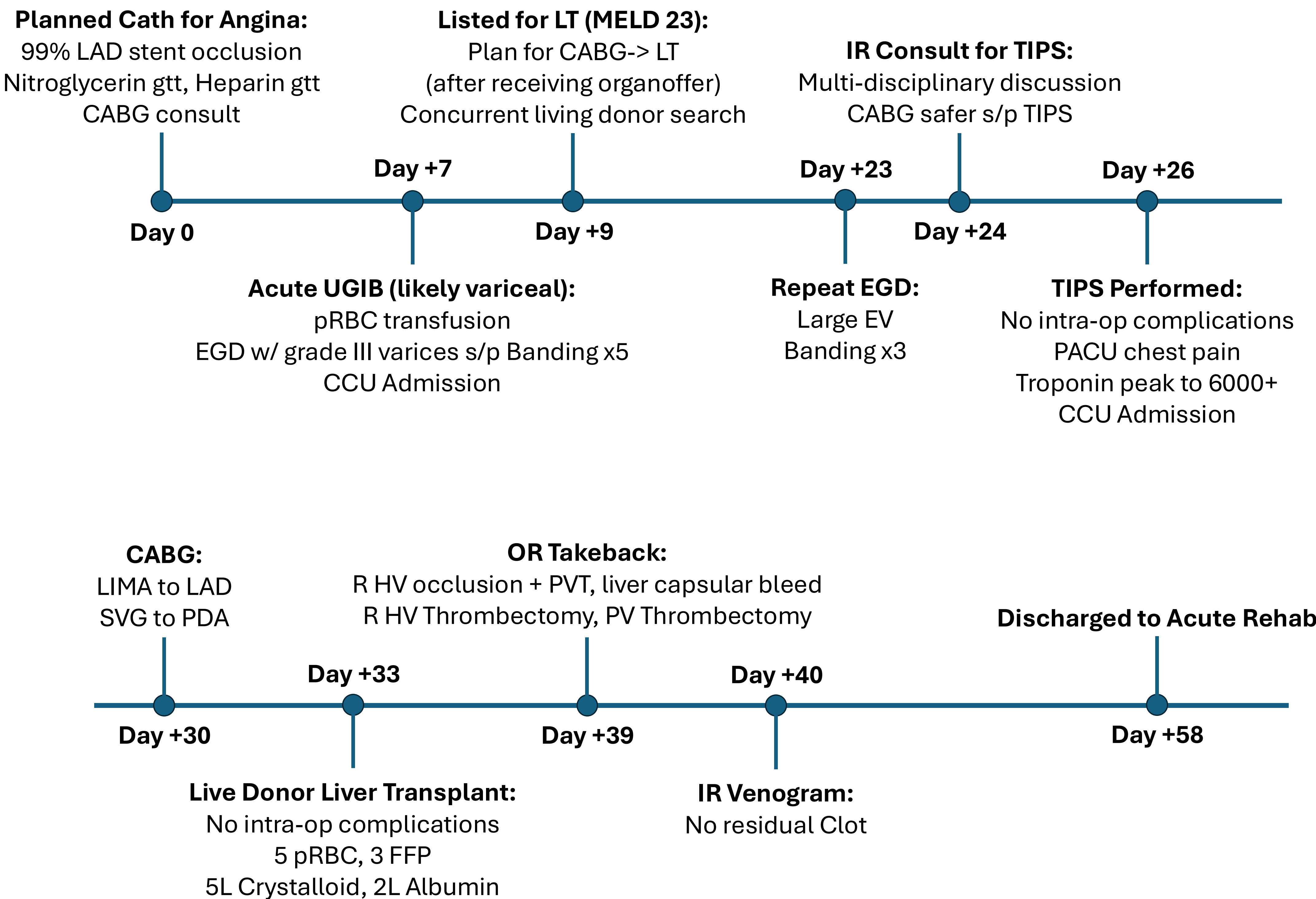


Figure 1: Comprehensive timeline of peri-operative interventions and major complications during the management of coronary reperfusion and liver transplant surgery.

Discussion:

- This is the most compressed timeline of TIPS, CABG, and LDLT from our literature review
- No case reports of acute coronary syndrome following TIPS while awaiting liver transplant
- Multi-disciplinary IR, CT Surgery, Anesthesia, Hepatology, Transplant surgery discussion regarding timing of interventions
- Several pre-existing case series comparing simultaneous vs staged cardiac + liver transplant surgery
- No clear recommendations on coronary vascularization before liver transplantation
- Anti-coagulation and resuscitation management both intra-operatively and post-operatively
- Specific focus assessing cardiac function and end-organ perfusion during IVC partial clamping and liver reperfusion

References:

- Ang et al, "Intraoperative type I acute myocardial infarction during liver transplant requiring intraaortic balloon pump," Exp Clin Transplant 2022; 20(8): 782-5.
- Horwitz et al, "Simultaneous vs staged cardiac intervention in high-acuity liver transplant," JAMA Surg 2023; 158(11): 1218-20.
- Imam et al, "Cardiac intervention before liver transplantation," Transplant Proc 2021; 53(5): 1622-5.

