From Cardiac Arrest to Definitive Repair : Delayed VSD Closure and CABG in Post-Infarction Ventricular Septal Rupture

CLINICAL CHALLENGE

Condition: Post-Myocardial Infarction Ventricular Septal Rupture (VSR).
Complication: Cardiogenic Shock (SCAI Stage E) and Cardiac Arrest.
The Dilemma: Immediate surgery carries a prohibitive mortality risk due to necrotic and friable myocardial tissue.

INTERVENTION

Strategy: Implementation of a "Stabilize-then-Delay" approach.
Device: Intra-Aortic Balloon Pump (IABP) acts as a crucial hemodynamic bridge.
Mechanism: Reduces left ventricular afterload, decreases left-to-right shunt, and improves systemic perfusion.

THE BRIDGE TO RECOVERY

Timeline: A strategic 12-day delay from the cardiac arrest event to surgery.
Metabolic Benefit: Facilitates rapid multi-organ recovery, including normalization of renal and hepatic functions.
Mechanical Benefit: Allows infarcted septal margins to fibrose and strengthen for a more secure surgical repair.

DEFINITIVE REPAIR & OUTCOME

Procedure: Successful delayed VSD closure and Coronary Artery Bypass Grafting (CABG).
Result: The patient was successfully weaned from mechanical support and transitioned to the ward for recovery.

Take Home Message : A protocolized "stabilize-then-delay" strategy utilizing IABP support buys essential time for multi-organ recovery and tissue maturation, converting a fatal SCAI Stage E shock into a survivable scenario