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The Hemodynamic Fallacy: Pooling Apples and Oranges in Cardiogenic Shock Meta-Analyses

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Abstract

A recent Lancet meta-analysis by Thiele et al. reported no significant mortality benefit with the routine use of mechanical circulatory support (MCS) in infarct-related cardiogenic shock (OR 1.10). This conclusion may be an artifact of pooling fundamentally heterogeneous devices (intra-aortic balloon pump [IABP] vs Impella or extracorporeal membrane oxygenation [ECMO]) and failing to account for implantation timing. Utilising ShockLogic simulation demonstrates this is largely due to device heterogeneity and safety dilution, potentially obscuring the benefits for early active hemodynamic support in STEMI.

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