Abstract:
Background: Limited data is available on contemporary use of intra-aortic balloon pump (IABP) and other mechanical circulatory support (O-MCS) devices in patients undergoing percutaneous coronary intervention (PCI) with cardiogenic shock (CS).

Methods: Patients undergoing PCI in CS at 1,429 NCDR CathPCI® participating hospitals were identified from 2009 to 2013. Trends and hospital-level variation in the use of IABP and O-MCS were described.

Results: Of 76,474 patients undergoing PCI with CS, 41,286 (54%) received no MCS, 29,730 (39%) received IABP only, 2711 (4%) received O-MCS only and 2747 (4%) received IABP with O-MCS. At the start of the study period, 45% of patients undergoing PCI with CS received an IABP and 7% received O-MCS. The proportion of patients receiving IABP declined at an average rate of 0.3% per quarter while the rate of O-MCS use was unchanged over the study period. We found broad site-level variation in the predicted probability of IABP (interquartile range 33-51%, median hospital 42%). Higher probability of use of IABP or O-MCS was found in large (>600 beds) and university/teaching hospitals. Use of O-MCS was clustered at a small number of hospitals with the predicted probability of O-MCS use being greater than 20% at less than one-tenth of hospitals.

Conclusions: In this large national registry, use of IABP has decreased over time without concurrent increase in O-MCS use. Probability of IABP use varied between hospitals, but the use of O-MCS was clustered at a small number of hospitals.

Research Category: Outcomes Research