

**[548] Experience with the TandemHeart Percutaneous Ventricular Assist Device in Heart Failure Patients Undergoing Cardiac Surgical Procedures**

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**Purpose:** In 34 patients with refractory cardiogenic shock, the PTVA was used as a bridge to additional cardiac surgery: 5 patients underwent cardiac transplantation; 16 patients underwent left ventricular assist device (LVAD) implantation; and 13 patients underwent other cardiac surgery.

**Methods and Materials:** In 34 patients with refractory cardiogenic shock, the PTVA was used as a bridge to additional cardiac surgery: 5 patients underwent cardiac transplantation; 16 patients underwent left ventricular assist device (LVAD) implantation; and 13 patients underwent other cardiac surgery.

**Results:** The 30-day mortality rate was 17.6% (6 of 34) and 79.5% (26 of 34) patients were still alive at 6 months. The mean follow-up period was 8.1 months and none of the deaths were related to the TandemHeart device itself. Of the 14 LVAD patients, 3 expired during support, 1 was bridged to transplant and the rest are still undergoing long-term support. Five of the 13 cardiac surgery patients expired in the immediate post-operative period, while the 5 patients bridged to transplant are currently alive. Complications related to the TandemHeart included minor bleeding around the femoral artery cannula requiring blood transfusion (n=3), retroperitoneal bleed (n=1), residual atrial septal defect that required percutaneous closure (n=1), and lower-extremity ischemia (n=1). Out of the 16 patients with long term LVADs, 6 patients had ASDs closed prophylactically thru sternotomy. Of the remaining 8 patients (non-sternotomy patients), only 1 ASD had clinically significant hypoxemia and therefore it was closed by percutaneous means.

**Conclusions:** In patients with refractory cardiogenic shock, the TandemHeart proved quite promising as a bridge to transplantation, bridge to long-term LVAD, or perioperative support during cardiac surgery. Additional studies are needed to better delineate which patients will benefit most from this promising technology.

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**Concurrent Session 37: Emergent Analyses of Novel Devices (5:00 PM-6:30 PM)**

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