Cardiogenic shock (CS) is a life-threatening condition requiring immediate treatment. Aggressive, hemodynamically guided medical management with timely use of appropriate mechanical circulatory support devices is often necessary. We studied 105 consecutive patients who received percutaneous extracorporeal membrane oxygenation (ECMO) between 1995 and 2015. In-hospital mortality decrease from 90% to 64% for acute myocardial infarction (AMI; n=68, M/F 56/12, age; 69 [60-77] years) and from 67% to 21% for fulminant myocarditis (FM; n=37, M/F 21/16, age; 42 [25-59] years) (comparing the first quartile of 1995-1999 with the last quartile of 2010-2014). These findings indicate that the mortality of CS remains unacceptably high, in particular in AMI patients despite efforts at early revascularization and ECMO. IMPELLA is a catheter-based miniaturized ventricular assist device, providing circulatory support, ventricular unloading, and restoring myocardial perfusion. We experienced 13 consecutive CS patients receiving IMPELLA from January 2018 to August 2018. The etiologies of CS were AMI in 4 patients (M/F 4/0, age; 63 [41-71] years), FM in 6 patients (M/F 4/2, age; 52 [18-70] years) and others (n=3). Of these, 4 patients received IMPELLA2.5 and the remaining 9 patients received IMPELLA5.0. Combined use of IMPELLA with ECMO support was required in 5 patients. Overall in-hospital mortality was 23%; 50% in AMI patients and 11% in non-AMI patients.
Since CS remains a major challenging in acute cardiovascular care, further accumulation of clinical data and a multidisciplinary approach for CS are recommended to guide the rapid and efficient use of available treatments.

[Keywords] shock / heart-assist device