Background: Cardiogenic shock (CS) complicating acute coronary syndromes is associated with increased morbidity and mortality. Although percutaneous coronary intervention (PCI) improves clinical outcomes, it is unclear whether drug eluting stents (DES) are superior to bare metal stents (BMS) in reducing mortality in CS. In this study we examined the effect of DES vs. BMS on mortality in patients with CS undergoing PCI and whether DES use confers mortality benefit specifically in ST-elevation MI (STEMI) and/or non-ST-elevation MI (NSTEMI).

Methods: We examined an observational cohort of 1024 patients with CS treated with PCI between 2005 and 2011 at 8 tertiary cardiac centers across London, UK. Multivariable Cox-proportional hazards models were used to determine independent predictors of mortality.

Results: 682 patients (67%) had STEMI and 342 patients (33%) had NSTEMI. DES were used in 39% of patients with greater use in NSTEMI (37% vs. 42%, p=0.043), but length of stented segments were similar between both groups. When adjusting for patient, clinical and procedural characteristics, the use of DES was an independent predictor of 1-year mortality (HR=0.66, 95% CI: 0.51-0.86, p=0.002). Furthermore, DES use conferred mortality benefit in STEMI (HR=0.63, 95% CI: 0.46-0.87, p=0.005), but no benefit in NSTEMI (HR=0.96, 95% CI: 0.57-1.63, p=0.889).

Conclusions: In this large registry analysis of patients with CS treated with PCI, the use of DES was associated with a significant reduction in 1-year mortality. This benefit appears to be seen specifically in patients with STEMI.