

中文題目：比較需要機械循環支持的成人與小兒猛爆性心肌炎長短期預後的差異
英文題目：Disparity in short-term and long-term survival outcomes between pediatric and adult fulminant myocarditis treated with mechanical circulatory support

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Background: Little is known regarding the survival benefit of mechanical circulatory support (MCS) for patients with fulminant myocarditis (FM) and cardiogenic shock. We intended to investigate the survival difference of FM between children and adults.

Methods: Data was retrospectively retrieved by using ICD-9-CM codes in a single tertiary center from September 1999 to December 2014. After excluding chronic myocarditis, pericarditis, and myocarditis related to autoimmune, drugs or ambiguous etiologies in 416 cases, a total of 134 patients with acute myocarditis were identified and documented by detailed chart reviewing. We divided them into adult group (n=69, defined as age ≥ 18 years) and pediatric group (n=65, defined as age < 18 years). Those with fulminant myocarditis (n=95) were defined as a rapidly progressive myocarditis course with a need of pharmacological or mechanical hemodynamic support. Survival rate was also compared among the FM patients treated with and without MCS.

Results: Inotropes were administered in 56.5% of FM adults and 86.2% of FM children. MCS were implanted in 46.4% of adults and only 21.5% of children. FM adults with the need for MCS had significantly higher in-hospital mortality than those without (56.3% vs 8.1%; $p < 0.0001$). In contrast, FM children with and without the need of MCS had a similar mortality rate of 28.6% and 37.3%, respectively ($p = 0.555$). Need for MCS, inotrope or ventilator and the level of cardiac troponin-I were independently predictive of in-hospital mortality in the FM adults. Differently, for the FM children, younger age, use of inotrope or ventilator, and initial value of leukocyte counts, lactate or brain natriuretic peptide were independent predictors of in-hospital death. After discharge, FM children had a notably lower 1-year mortality rate compared with adults (0% vs 8.7%; $p < 0.001$).

Conclusions: Even with MCS for FM with cardiogenic shock, the survival response between adults and children was quite different. MCS appeared not to provide better survival in FM children. Furthermore, FM adults with the need of MCS had remarkably poor short-term outcome.

Keywords: fulminant myocarditis, mechanical circulatory support, mortality, pediatric, adult