Review

Prog Cardiovasc Dis. 2021 Nov-Dec;69:35-46.
doi: 10.1016/j.pcad.2021.11.006. Epub 2021 Nov 18.

Temporary mechanical circulatory support in cardiogenic shock

Danilo Obradovic [1], Anne Freund [1], Hans-Josef Feistritzer [1], Dmitry Sulimov [1], Goran Loncar [2], Mohamed Abdel-Wahab [1], Uwe Zeymer [3], Steffen Desch [1], Holger Thiele [4]
Affiliations expand

- PMID: 34801576

DOI: 10.1016/j.pcad.2021.11.006

Abstract

Cardiogenic shock (CS) represents one of the foremost concerns in the field of acute cardiovascular medicine. Despite major advances in treatment, mortality of CS remains high. International societies recommend the development of expert CS centers with standardized protocols for CS diagnosis and treatment. In these terms, devices for temporary mechanical circulatory support (MCS) can be used to support the compromised circulation and could improve clinical outcome in selected patient populations presenting with CS. In the past years, we have witnessed an immense increase in the utilization of MCS devices to improve the clinical problem of low cardiac output. Although some treatment guidelines include the use of temporary MCS up to now no large randomized controlled trial confirmed a reduction in mortality in CS patients after MCS and additional research evidence is necessary to fully comprehend the clinical value of MCS in CS. In this article, we provide an overview of the most important diagnostic and therapeutic modalities in CS with the main focus on contemporary MCS devices, current state of art and scientific evidence for its clinical application and outline directions of future research efforts.

Keywords: Acute myocardial infarction; Cardiogenic shock; Temporary mechanical circulatory support.