

# Cesarean Section in an Impella Dependent Patient

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## Key Points:

- We present a case of successful Impella use to maintain fetal viability in early pregnancy and support hemodynamics during a planned Cesarean delivery (CD) in a patient with anthracycline-induced heart failure.

## Management:

- Weekly multidisciplinary meetings
- Discontinuation of heparin in anticipation of neuraxial anesthetic
- Arterial line, Central line, Swan placed
- Epidural carefully dosed
- Vasoactive infusions in line
- CT surgery and Impella representative on standby

## Background:

- Pregnancy-related physiologic and hemodynamic changes are poorly tolerated by patients with heart failure, placing them at high risk of decompensation. In severe cases, mechanical circulatory support (MCS) may be required. [1]
- The Impella is a temporary mechanical support device that pumps blood from the left ventricle to the proximal aorta. It increases aortic and coronary pressures, unloads the LV, and improves CO while reducing myocardial oxygen demand. [2]

## Take-Home:

- MCS should be considered for patients with heart failure as a bridge to viability and CD.
- Multidisciplinary collaboration enhances teamwork and improves patient care.
- Careful planning with adequate hemodynamic monitoring and appropriate personnel on standby can allow the use of neuraxial anesthesia and ensure a safe delivery.

