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CARDIOVASCULAR FLASHLIGHT

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Percutaneous biventricular cardiac assist device in cardiogenic shock**Patrick Hunziker*** and **Lukas Hunziker**

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Patients with cardiogenic shock who require mechanical circulation support may profit from more effective, less invasive devices. *Panel A* shows the first-in-man use of biventricular percutaneous support with impeller devices (Abiomed Impella, Danvers, MA, USA). The 54-year-old patient presented with acute myocardial infarction and shock due to biventricular pump failure. When angioplasty of the RCA, intravascular volume optimization, and high-dose inotropes failed to stabilize the patient, a percutaneous left ventricular-assist device was implanted. Pulmonary oedema resolved, but severe right heart failure with multi-organ failure (liver, kidney) persisted despite nitric oxide therapy. Additional percutaneous device implantation in the right heart led to circulatory stabilization and progressive organ function recovery, with successful device weaning on Day 8. Echocardiography on Day 44 showed a normal right ventricular function. *Panel B* shows the pump head and *Panel C* the topology of the devices.

