




Every journey begins with a first step: the first microaxial flow pump case at our institution

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With the increasing number of older patients and those with multiple comorbidities, there is a growing need for complex and high risk percutaneous coronary interventions. The use of Impella, a percutaneously placed mechanical circulatory support device, offers temporary hemodynamic stabilization and has the potential to reduce peri-interventional complications and improve early survival in these patients.¹ We present a case of a 77-year-old male patient with coronary artery disease, ischemic cardiomyopathy with reduced ejection fraction, moderate aortic stenosis, diabetes, and a history of hemorrhagic stroke, who presented with acute non-ST-elevation myocardial infarction. Coronary angiography revealed multivessel disease, including significant stenosis of the left main coronary artery, left anterior descending artery (LAD), left circumflex artery, and moderate stenosis of the right coronary artery. Due to the increased surgical risk, high-risk percutaneous coronary intervention (HR-PCI) was performed on the LAD with Impella support, along with the placement of two drug-eluting stents. Postprocedural femoral bleeding and urosepsis were successfully managed. Follow-up echocardiography showed improved ejection fraction and reduced mitral regurgitation. This case highlights the successful use of HR-PCI with Impella support in a patient with severe coronary disease and multiple comorbidities. Despite complications, prompt intervention led to stabilization and recovery.

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LITERATURE

1. van den Buijs DMF, van den Brink FS, Wilgenhof A, Zivelonghi C, Verouden N, Knaapen P, et al. Complex High-Risk Indicated Percutaneous Coronary Intervention With Prophylactic Use of the Impella CP Ventricular Assist Device. *Complex High-Risk Indicated Percutaneous Coronary Intervention With Prophylactic Use of the Impella CP Ventricular Assist Device.* *J Invasive Cardiol.* 2022 Sep;34(9):E665-E671. <https://doi.org/10.25270/jic/22.00031>