

### CR59 Myocardial bridge stenting complicated by coronary artery perforation and midLAD right ventricle fistula formation in NSTEMI patient

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DOI: <https://doi.org/10.26800/LV-145-supl2-CR59>

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**KEYWORDS:** drug-eluting stents; myocardial bridging; percutaneous coronary intervention

**INTRODUCTION/OBJECTIVES:** Myocardial bridging (MB) is defined as a coronary artery that tunnels through the myocardium, under the overlying muscle bridge. It almost exclusively affects the left anterior descending artery (LAD), especially the middle part (midLAD).

**CASE PRESENTATION:** A 62-year-old male presented to the emergency department of University Hospital Centre Sestre Milosrdnice with acute myocardial infarction without ST-segment elevation. Before the event, the patient suffered from arterial hypertension and hyperlipidemia and was treated with bisoprolol, perindopril/amlodipine, and atorvastatin. Preprocedural echocardiography showed no wall motion disturbances. Coronary angiography was performed and a 15-mm-long MB of LAD was described with a fixed 80% stenosis (dynamic stenosis 90%). The patient was already taking optimal medical therapy, so percutaneous intervention was chosen as a treatment option. After predilatation, a drug-eluted stent was implanted. Soon after the stent placement, a large arterial perforation with a fistula to the right ventricle was observed. Because of the left-right shunt, the patient remained asymptomatic. Due to the progression of the contrast extravasation during the next few minutes and the inability to rule out the stent fracture, the stent graft was implanted. Contrast extravasation resolved completely. During the remaining hospital stay, the patient was free of symptoms and is doing well at follow-ups, without any ischemic symptoms.

**CONCLUSION:** Patients with MB can experience ischemic symptoms and the initial treatment approach should be medical. Patients who remain symptomatic despite medical therapy should be considered for surgical or interventional treatment. Stenting MB can lead to arterial perforation which can be treated successfully with covered stents.

### CR60 Myocardial Bridging: A cause for concern?

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DOI: <https://doi.org/10.26800/LV-145-supl2-CR60>

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**KEYWORDS:** Cardiovascular disease; Computed tomography; coronarography

**INTRODUCTION/OBJECTIVES:** Myocardial bridging (MB) is a condition where a segment of a coronary artery, which normally runs on the surface of the heart muscle, instead dives into the heart muscle and then re-emerges to continue its normal path. In MB, a segment of the coronary artery dives into the heart muscle during systole and re-emerges during diastole. This can lead to compression of the artery, reducing blood flow to the heart muscle during systole and causing symptoms such as chest pain or shortness of breath.

**CASE PRESENTATION:** The patient has been treating arterial hypertension for the past year and has recently been taking statin therapy, and a few days before coming to our clinic, he was treated in a hospital for anginal complaints that lasted for 20 minutes. Acute coronary syndrome was ruled out, ergometry was normal, ultrasound of the heart showed normal findings. Objectively, when he arrived at the clinic, he had no complaints, but he noticed shortness of breath during exertion. Does not smoke, occasionally consumes alcohol, positive family history of cardiovascular diseases. Considering the clinical signs and risk factors, indication for MSCT coronary angiography was made. There were no evident atherosclerotic plaques and/or narrowing on the coronary arteries, but a significant myocardial bridging was observed on the middle segment of the LAD at a distance of 25 mm.

**CONCLUSION:** MB is a relatively common condition, occurring in about 5-10% of the population. It can be diagnosed through tests such as coronary angiography, CT angiography, or cardiac MRI. In most cases, myocardial bridging is asymptomatic and does not require treatment. However, in cases where it causes symptoms, treatment options may include medications to manage symptoms or in rare cases, surgery to bypass or remove the affected segment of the artery.