

From unwanted to unavoidable: two-stent bifurcation percutaneous coronary intervention in ST-elevation myocardial infarction

Mesud Jamaković*

Clinical Center University of Sarajevo, Sarajevo, Bosnia and Herzegovina

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***ADDRESS FOR CORRESPONDENCE:** Mesud Jamaković, Clinical Center University of Sarajevo, Bolnička 25, 71000 Sarajevo, Bosnia and Herzegovina. / Phone: +387-33-298-163 / E-mail: dr_jamakovic@yahoo.com

ORCID: Mesud Jamaković, <https://orcid.org/0000-0001-7260-1815>



FIGURE 1. Occluded left anterior descending artery.

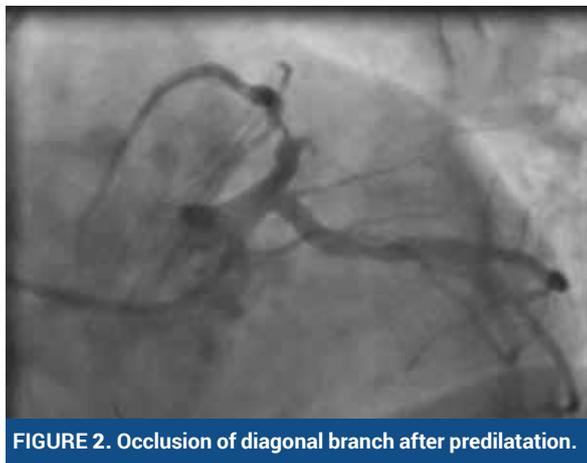


FIGURE 2. Occlusion of diagonal branch after predilatation.

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Introduction: To reduce additional, unnecessary risk during primary percutaneous coronary intervention (PCI), of especial importance is to perform the procedure as simple and safe as possible. Complex PCI procedures per se are at increased risk of complications regarding to morbidity and mortality.¹ Hence, if not necessary - complex procedures during pPCI are postponed after patient's condition is stabilized. *Aim:* To emphasize importance of operator's experience and skills obtained in elective complex procedures that can be employed in urgent cases.

Case report: 58-year-old male admitted to hospital over emergency department due to antero-septal ST-elevation myocardial infarction (STEMI). Coronary angiography revealed multi-vessel disease with occlusion of left anterior descending artery (LAD) just below bifurcation with large D1 branch as a culprit lesion (Figure 1). During pPCI, occlusion of large adjacent diagonal branch (D1) occurred (Figure 2), resulting in rapid hemodynamic deterioration. Initial simplex strategy with one stent in LAD switched to complex two stent PCI by TAP technique (Figure 3), resulting in optimal final angiographic result (Figure 4) and hemodynamic recovery. Echocardiography revealed left ventricle (LV) ejection fraction of 40% due to hypokinesia of antero-septal wall of LV. A control ICA revealed patent both stents with complete flow restoration throughout LAD and D1. Hereafter, a staged PCI of right coronary artery (RCA) performed with implantation of two more drug eluting stents. After the procedure patient remains stable and discharged two days later.



FIGURE 3. Kissing balloon inflation in "T and protrusion" technique.

