

Complex percutaneous coronary intervention for unprotected distal left main bifurcation lesion in a patient with cardiac allograft vasculopathy

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Introduction: Cardiac allograft vasculopathy (CAV) is a progressive form of coronary disease that defines the long term prognosis in heart transplant patients. The mortality of surgical revascularization in post-transplant patients is very high. Percutaneous coronary intervention (PCI) has a relatively low periprocedural mortality and high acute angiographic success, but still high restenosis rate and poor long-term results. Bypass surgery (CABG) is considered the gold-standard for unprotected left main coronary artery (LMCA) disease in non-transplant patients, especially with the distal bifurcation lesion. Optimal PCI techniques are needed to improve the results and complex double kissing crush technique seems to be promising.

Case Report: We present a case of a 27-year-old patient who received heart transplant at the age of 24. During the second post-transplant year, he developed acute inferior ST-elevation myocardial infarction and primary PCI of RCA was performed. An eccentric LMCA stenosis with an involvement of large ramus intermedius (RI) and almost occluded, minor left circumflex (LCx) were detected on control an-

gio. We decided to perform PCI on this complex lesion with double kissing crush technique. Two wires were positioned distally to the lesions in both the LAD and ramus intermedius (RI). A stent was positioned in the RI with few proximal millimeters protruding into the LMCA, a balloon with a length long enough to cover the protruding stent segment was concurrently positioned in the LAD. The RI stent was deployed. The SB stent-balloon and wire were removed. The balloon in LAD was then inflated at a high pressure to crush the protruding RI stent. The RI ostium was rewired and dilated with a balloon. The bifurcation was then kissed with two balloons. Afterwards, a stent was deployed in the LMCA toward LAD at a high pressure. The RI ostium was rewired for the second time through the LMCA stent strut and dilated with a balloon at a high pressure. The final kissing balloon inflation in the bifurcation was performed at a high pressure and finished with proximal optimization of LMCA. The control angio performed 6 months later showed no signs of restenosis.

Summary: The treatment of CAV is very challenging and while CABG remains a poor revascularization option, PCI of complex lesions such as those of LMCA require optimal technique to reduce the incidence of adverse cardiac events and prevent further graft deterioration.

KEYWORDS: cardiac allograft vasculopathy, percutaneous coronary intervention.

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