

Innovative technique using a perfusion balloon and a DCB for LM Bifurcation Restenosis after DESs

In-stent restenosis (ISR) after drug eluting stent (DES) in left main (LM) disease is occurring with an incidence of 14%-19%. Most cases involves restenosis at the ostial left circumflex (LCX). Optimal management of the ISR is still debated. However drug coated balloon (DCB) may become an option. The DCB is recommended to inflate for a minimum of 30 sec in order to release paclitaxel into the vessel wall. But long balloon inflation in the LM often impair the hemodynamic stability. So we formulate safer technique of simultaneous inflation using a continuous perfusion balloon catheter and a DCB. The perfusion balloon is safer than the conventional balloon for simultaneous inflation during at least 30 sec inflation of the DCB in such cases. We have experienced three PCI cases using this technique so far. In all cases, simultaneous kissing balloon inflation is performed for 40 sec and hemodynamic status was stable during the procedure. There are some tricks and tips for the innovative procedure to prevent deterioration of the coating and achieve enough paclitaxel releasing into the lesion. If the simultaneous inflation would be performed alternately for each branches, the technique might be useful for the restenosis case of not only one side or main branch but also both branches. Of course we need to follow up for the long term.