Successful percutaneous coronary intervention for complex Left main bifurcation lesion through snuff box access with “Stepped reverse bent wire technique”, a novel wire manipulation technique

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Abstract

Background : The mortality of patients with LM is 2- to 3-fold greater than patients with one- or two-vessel disease, averaging 30% to 50% over 5 years in those treated medically. The more severe the stenosis the greater the risk.

Case summary: We encountered a case of percutaneous coronary intervention for complex distal LM bifurcation lesion through distal left radial access. The left circumflex artery arised by an aneurysm facing the distal LM and LAD had severe ostial stenosis originating from LCX aneurysm with a nearby straight angle .Also there were 2 big septal branches originated from the LAD just near its ostium . There was a great difficulty to cross the LAD artery with this markedly angulated pattern. The “reverse bent wire technique facilitated with the Crusade catheter” enabled us to cross a guidewire through to the markedly angulated LAD in a stepwise manner by successful crossing to the first septal branch then applying the same technique to cross to the second septal branch successfully. Thereafter, we adopted the reverse bent wiring with the Crusade catheter for wiring the LAD and successfully completed all procedures.

Discussion: This technique can be very effective in specific situations in practical percutaneous coronary intervention (PCI). Many PCI operators may empirically adopt this kind of wire manipulation technique. However, this case is the first report in the world describing the application of “Step by step reverse bent wiring with the Crusade catheter” for crossing the complex LM bifurcation via Snuff box access .