

Efficacy and Safety of New "Balloon Dilator Technique" to Deliver an Inner Catheter in Severely Calcified or Torturous Coronary Artery.

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Background: Four French (Fr) inner guide catheter (IGC) is useful to deliver a coronary stent to a distal lesion in severely calcified or torturous coronary artery. However, it is sometimes difficult to insert the IGC into distal coronary segment even with anchor balloon technique. Methods and Results: We originated new "Balloon Dilator Technique" to easily insert a 4 Fr IGC into distal coronary segment. In the technique, we used a balloon catheter in the IGC like a dilator of guiding sheath. In case of difficulty in insertion of IGC even with anchor balloon technique, we inserted a 2.0 mm balloon catheter into the IGC and the just distal half of the balloon was beyond the tip of the IGC. Then, we inflated the balloon with low pressure and pushed the IGC simultaneously with deflating the balloon and we could insert the IGC more deeply into the coronary segment. Dilating balloon catheter could make a torturous segment straight more and wider. Further, it could give less damage on the coronary arterial wall such as dissection by the tip of the IGC. From April, 2011 to July, 2012, we performed PCI in 528 cases and used the new technique in consecutive 28 cases. In all of the 28 cases, we succeeded PCI without any complication. Conclusion: The new "Balloon Dilator Technique" was safe and effective to deliver a 4 Fr inner guide catheter into torturous coronary artery.