Minimally Invasive Retrograde Approach for CTO with Single 6Fr Guiding Catheter

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Case

A 60-years-old man visited our hospital because of a persistent chest pain on June 9 in 2010. Emergent CAG revealed a total occlusion in the middle of LAD and a total occlusion in the middle of LCX. We thought that the culprit lesion of AMI was the LCX and the occluded LAD was CTO.
So we performed PCI and deployed DRIVER stent 3.0 × 18 to the LCX.

We performed PCI to the LAD on June 25.

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the middle of LAD CTO

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We started PCI with single 6Fr guiding catheter using right radial artery.

Guiding catheter  Heartail II BL3.5 (6Fr)
Guide wire  X-treme, Wizard3, FielderFC ULTIMATEbros3, RG3, SION
Micro catheter  Corsair150cm
Balloon  LAOH 1.3×10, Ozma 2.25×15 SAPPHIRE NC 3.5×8
Stent  XienceV2.5×23, XienceV2.5×28
X-treme → Wizard3 with Finecross went into the false lumen
Switching to retrograde approach through septal branch by FielderFC with Corsair

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FielderFC had advanced to the end of CTO through septal branch.
ULTIMATEbros3 had passed the CTO retrogradely.
We could insert Corsair into guiding catheter retrogradely.
We exchanged the guidewire to RG3 guidewire (length 330 cm) to accomplish externalization with single 6 Fr guiding catheter.
After externalization we could advance LAOH 1.3 × 10, but we felt strong resistance in the guiding catheter.
After ballooning by LAOH 1.3 × 10

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We tried to advance guidewire antegradely, but failed.
Before ballooning by Ozma 2.5 × 15, we had to remove the Corsair.
Stent deployment
Removing the RG3 guidewire made the septal branch injured.
We inflated two balloons at the same time to stop leaking
Final angiogram

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Usually we need 7Fr or 8Fr guiding catheter in such a case. When we advance Corsair retrogradely, we can not use anchor technique because of single guiding catheter. Therefore, if we could not advance Corsair retrogradely, we would have to insert another guiding catheter. Furthermore, 6Fr guiding catheter is so thin that it is difficult to insert Corsair and balloon catheter into the guiding catheter at the same time. There are some problems like this. Fortunately we could achieve minimally invasive retrograde approach for CTO with single 6Fr guiding catheter.

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