

Approach to Instent Cto

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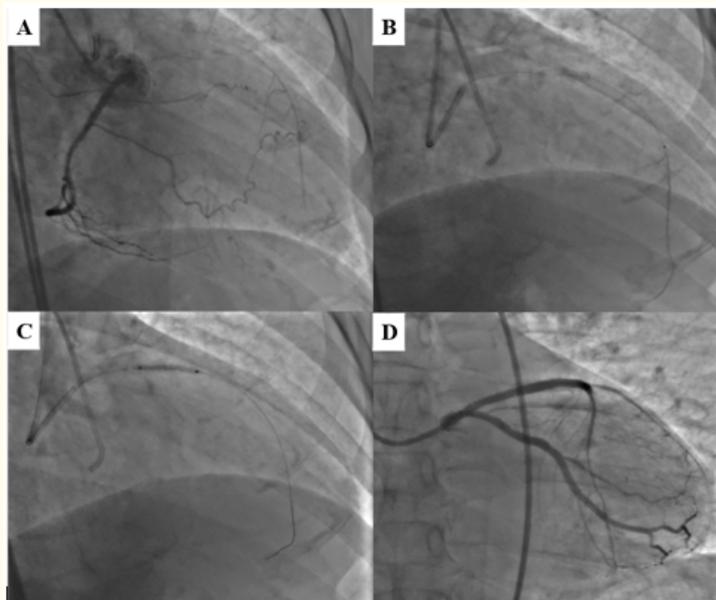
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Chronic total occlusions (CTO)'s are described as 100% coronary occlusions with Thrombolysis in Myocardial Infarction grade 0 flow persisting for > 3 months. Treatment of CTOs should be considered if linked with symptoms or viable/ischemic myocardial territories. CTO requires more time and experience than other percutaneous coronary interventions (PCI). We report the case of a patient with the successful recanalization of an in-stent chronic total occluded.

A 59-year-old female admitted another hospital with new onset CCS Class III angina and a positive nuclear myocardial perfusion stress test for anterior ischemia. She underwent diagnostic cardiac catheterization six months ago which showed proximal left anterior descending (LAD) chronic total occlusion (CTO) secondary to in-stent restenosis (ISR). There was a failed PCI for CTO segment in the same session.

The patient was draped and prepped in a sterile fashion. Right and left femoral artery was accessed with bilateral 6F sheaths. The Japanese CTO score was 3 with blunt proximal cap occlusion, length about 30 mm and re-try lesion. An EBU (extra backup) 3.5 mm 6F was used for left main cannulation. Judkins Right (JR) 4 was used for right angiogram. 8,000 units of unfractionated heparin was given with intravenously. Activated clotting time (ACT) was followed closely for keep above 300 seconds. Selective angiograms were performed both the right coronary artery and left system for collateral network (Figure 1A). The angiogram showed that distal LAD had blood flow from right collaterals. An EBU 3.5 mm 6F guiding catheter with a supercross microcatheter (Teleflex) were loaded onto a Pilot 150 guide wire (Abbott Vascular) and brought to the level of the ISR. Manipulation of the microcatheter and wire resulted in the lesion being crossed successfully (Figure 1B). Angioplasty was performed with Minitrek 1,5 x 15 mm (Abbott Vascular) and Invader 2,0 x 20 mm (Alvimedica) balloon inflation after guidewire crossed. 2,75 x 26 mm Xience Alpine (Abbott Vascular) Drug Eluting Stent (DES) was implanted to overlap the distal part of ISR segment. After then 3,0 x 48 mm Xience Alpine (Abbott Vascular) Drug Eluting Stent (DES) was implanted from LAD ostium to cover the segment with CTO (Figure 1C). There was no gap between the implanted stents. Proximal segment of LAD DES was postdilated with 3,5 x 15 mm NC Solarice (Medtronic). There was TIMI-3 flow, no thrombus formation, embolization or dissection was noted (Figure 1D).

CTO remains one of the most difficult subsets for the cardiologist because of the observed procedural complexity. Due to growing experience with the percutaneous interventional approach for this type of lesions and new technical features, the procedural success rates for CTO-revascularizations have significantly increased within the last years and is now considered within the 90% range. Although these improvements, the lesion subset of in-stent CTOs has always been linked with lower procedural success rates (63% to 71%). Recent data have demonstrated that successful percutaneous recanalization of coronary CTOs results in increased survival as well as improved left ventricular function, reduced angina and increased exercise tolerance.



Figure

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