Stenting of Distal Abdominal Aorta CTO with novel coronary kissing stents technique

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Introduction

- Occlusion in infrarenal aorta with involvement of the iliac arteries (type D lesion) is the most frequent form of aortic stenosis.
- While the CTO lesion of Infrarenal Aortic is rarely found.
- The cause of aortic stenosis basically was due to atherosclerosis process.
Clinical Characteristic

- A 57-years old gentleman, complaining of intermittent claudication
- Physical examination found weak pulses in both femoral arteries
- No history of DM and hypertension
CT Abdominal Aorta

Total occlusion with length: 2.1 cm
Antegrade & Retrograde Aortography

LAO 35

AP
What Options Do We Have?

A. Surgery:
- Direct Thromboendarterectomy (TEA) with or without patch
- Aorto-bifemoral bypass
  10-year patency rates ~85 %
  30-day mortality 2–3 %

B. Endovascular: Stenting
Patient refused for surgery and opted for endovascular procedure
Miracle 6 GW supported by Corsair MC from distal point

(Those GWs were not in the same lumen and the antegrade wire was regarded as a marker)
Changing Miracle 6 GW to Conquest
Pro 20 GW - supported by Finecross MC
Multiple Views Confirmed that both wires were in the same lumen

Conquest 20 GW finally crossed the CTO – AP View
Injected contrast from retrograde microcatheter filled the lumen of the Aorta

AP View

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Predilatation with Mini Trek balloon 1.5/20mm to make Finecross easy to cross CTO

Exchange Conquest Pro gw with Extra Support Wire. Predilatation with NC Trek balloon 4.0/15mm
Predilatation with Voyager RX ballon 4.0/20mm

Distal to Proximal
Post Dilatation Angiography

As contrast injected near the hole of crossed CTO, contrast flow below

Change the wire with extra support wire (Right & Left access)
Predilatation with Foxcross 7.0/40mm Balloon
(Using long sheath 6F/25 cm)

From Left Femoral Access

From Right Femoral Access
Stent Choices

Self Expandable Stent?

or

Balloon Expandable Stent?
Kissing Stents Technique with Dual Omni-link Elite 8.0/59 mm

Stents Positioning

Final Kissing Stents
Post Procedure Angiography

AP View

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Follow Up

- The pulsation of femoral artery to both dorsalis pedis arteries were excellent
- Medication:
  - Aspirin 1 x 100 mg
  - Clopidogrel 1 x 75 mg
  - Lipitor 1 x 40mg
Take Home Message

• Total occlusion of infrarenal aorta could be managed successfully with endovascular treatment
• Endovascular treatment for aortic total occlusion is safe and durable
• The key point of the procedure is to make sure that both wires (antegrade & retrograde) are in the true lumen
• Final kissing stents is a suitable technique for infra renal aorta stenosis with involvement of iliac arteries.