Perforation of coronary artery after rotablator atherectomy for heavy calcified lesion

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C.C : Chest pain (CCS III) for 20 days

Risk Fx : Hypertension on medication for 15 yrs

P/Ex : BP 143/70 mmHg, PR 76/min

Lab : TC/TG/HDL/LDL  234/139/56/150 mg/dL, Glucose (AC) 123 mg/dL, Hb A1C 5.9%
Electrocardiography

BP 143/70 mmHg, PR 76/min
Echocardiogram

1. Preserved LV systolic function (EF=52.5%)

2. **RWMA**: severe hypokinesia of antero- and posteroseptum from low-LV to apex

3. Trivial MR, AR, TR and PR

4. No pericardial effusion

5. No thrombus
Coronary angiography
PCI for LAD

Ryujin 2.0 X 15 mm
PCI for LAD

Ryujin 1.5 X 15 mm, 20 atms
PCI for LAD

Ryujin 1.5 X 15 mm, 20 atms
PCI for LAD

Ryujin 1.5 X 15 mm, 20 atms
PCI for LAD

Ryujin 1.5 X 15 mm, 20 atms
2\textsuperscript{nd} PCI for LAD

7F AL1 guiding catheter
Rotational atherectomy

Rotablator burr 1.5 mm
Rotational atherectomy

Rotablator burr 1.5 mm
Rotational atherectomy

Rotablator burr 1.5 mm
POBA after rotablator

IKAZUCHI 2.0 X 15 mm
POBA after rotablator

IKAZUCHI 2.0 X 15 mm
POBA after rotablator

IKAZUCHI 2.0 X 15 mm
Stent

Xience V 2.5 X 23 mm, 10 atms (FBS 2.58 mm)
Stent

- BP 80 mmHg, HR 50 BPM ➤ Volume loading
- Atropine, Dopamine infusion
- Chest pain

Xience V 2.5 X 23 mm, 10 atms (FBS 2.58 mm)
Prolonged balloon for perforation

Xience V stent balloon 2.5 X 23 mm
Prolonged balloon for perforation

Xience V stent balloon 2.5 X 23 mm
Prolonged balloon for perforation

Xience V stent balloon 2.5 X 23 mm
Prolonged balloon for perforation

Xience V stent balloon 2.5 X 23 mm
Graft stent for perforation

Jo graft-stent 3.0 X 19 mm, 10 atms (FBS 3.1 mm)
Stent for proximal lesion

Promus element 2.5 X 24 mm, 12 atms (FBS 2.5 mm)
Final angiogram
Echocardiography after PCI
F/U echocardiography
Discussion

- What is the cause of perforation?
  - rotablator or stent

- Perforation site: why not culprit lesion but distal part?
  - Is it related manipulation of rotablator?
Rotablator burr is within the lesion, the rotablator burr rotate only.

Rotablator burr is beyond the lesion, rotablator burr may rotate with up and down fashion.
If this distance is short, it minimize up and down movement of rotablator burr.
Thank you for attention!
CAG after rotablator