Radial access with embolic protection device to remove organized thrombus of left upper brachial artery

Jun-Won Lee
Division of Cardiology, Department of Internal Medicine
Yonsei University Wonju College of Medicine
Wonju Severance Christian Hospital, Wonju, Korea
Disclosure

Speaker name:

Jun-Won Lee

☑️ I do not have any potential conflict of interest
88 year-old female

CC: Left arm pain

Past history: Atrial fibrillation (30 years)

P/Ex: No pulsation of left radial and brachial artery

Initial BP 176/76 mmHg, HR 96 bpm

Hgb 11.7 g/dL
Cr 0.63 mg/dL (cal Ccr 95 mL/min)
BNP 215 pg/mL (ref<100)
CK-MB 0.77 ng/mL (ref<3.7)
Troponin I 0.015 ng/mL (ref<0.046)
Chest – X ray
Lt upper ext. CT angiography
Radial & Brachial angiography
014 Guidewire passing

014 Runthrough (Terumo)
Aspiration with guiding catheter (6Fr Multipurpose) x 6 times (positive)
Embolic protection filter device
(Spider Fx)
Ineffective retrieval of thrombus
Fragmentation of organized thrombus with balloon

Aviator 6.0/20mm (6 ATM)
Angio-guided capture of thrombus
Antegrade angiography
Final angiography
Total removed thrombus
Progress

- Lt radial pulsation: good
- Total procedure time: 2 hour 20 minutes
- The patient was intolerable because of prolonged procedure.
- Blood pressure (just after procedure): 237/117 mmHg
- So, I had to stop and decided to treat residual thrombus with IV heparin.
- Next morning: Comatous mental statous
Brain CT evaluation

ER admission

Follow-up
Summary

1. In the coronary intervention field, ESC guideline recommend to use radial access to reduce bleeding complications and mortality.

2. Radial access could have a potential benefit in patient with high bleeding risk such as old age, female, prolonged use of antiplatelet, anticoagulation therapy and especially the use of thrombolytic therapy.

3. Combined use of catheter directed aspiration thrombectomy, balloon angioplasty and embolic protection filter device under the guidance of contrast dye injection is an effective method to retrieve organized embolic thrombus of upper extremity.

4. Although this patient was dead, I believe interventional treatment strategy is effective and can decrease fatal bleeding and related mortality compared to the thrombolytic strategy.
Radial access with embolic protection device to remove organized thrombus of left upper brachial artery

Jun-Won Lee
Division of Cardiology, Department of Internal Medicine
Yonsei University Wonju College of Medicine
Wonju Severance Christian Hospital, Wonju, Korea