AORTIC PERFORATION CAUSED BY TRANSSEPTAL PUNCTURE

Beny Hartono¹, Muhammad Munawar¹,², Razakijr Omar³

¹/Binawaluya Cardiac Center, Jakarta
²/Department of Cardiology and Vascular Medicine, Faculty of Medicine, University of Indonesia, Jakarta
³/Raffles Hospital, Singapore
Disclosure

Nothing to disclose
Introduction

Transseptal Procedure

- Catheter ablation
  - Left side AP
  - AF ablation
- PTMC
- Mitral Clip
- Closure LAA
Major complication of transeptal puncture

- Pericardial puncture (3.2%)
- Systemic arterial embolism (1.1%)
- Aortic puncture (0.7%)
- Perforation of IVC (0.4%)
Aortic root puncture as complication of transeptal puncture

- This complication which always require an open heart surgery
- This is the first report of such complication which successfully sealed by Amplatzer Septal Occluder

Case Report

- An 85 year-old man with short of breath for couples of months
- He was diagnosed as having MS with MVA of 1.1 cm² and heavily calcified of mitral annulus. Its leaflets was pliable
- He had DM and claudicatio intermittent due to peripheral artery disease
- He was planned for PTMC
Pts had limb ischemia bilateral

Not able to put Reference Pig-tail in Aorta !!!
Inter-atrial septum puncture

Heavily calcified mitral stenosis (arrow)
Ooop !!!!!!! What's happening?
What should we do?

☐ Send to surgery
☐ Pull out the catheter and pericardiocentesis until closed spontaneous
☐ What next?

Try to seal the defect?
Inoue’s wire put into aorta via the iatrogenic hole (arrow)
Put 4 mm ASO and controlled by Transthoracic echocardiography
Release of the Amplatzer Occluder
Follow Up

- Discharged on 3rd day; no complication.
- Rx / Aspirin 160 mg → Clopidogrel 75 mg for 6 month

- Echocardiography in the 1st month, 3rd month and 6th month follow up
  - Good position of ASO
  - No residual flow
Take Home Message

- Use anatomical landmark: pigtail in aorta, coronary sinus catheter, RA-LA graphy, etc.
- Precautious during transeptal procedure, esp before advancing the sheath. Needle puncture will seal itself.
- Don’t pull out the sheath after insertion to the aorta
- Surgery is still the best option, however, sealed with an occluder device could be an alternative.
If you look very carefully, the contrast was within aorta
Take Home Message

- Use anatomical landmark: pigtail in aorta, coronary sinus catheter, RA-LA graphy, etc.
- Precautious during transeptal procedure, esp before advancing the sheath. Needle puncture will seal itself.
- Don’t pull out the sheath after insertion to the aorta
- Surgery is still the best option, however, sealed with an occluder device could be an alternative.