Transapical transcatheter plug closure of the huge aortic root pseudoaneurysm after ascending aortic replacement and aortic valve replacement

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Disclosure

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I have the following potential conflicts of interest to report:

- [ ] Consulting
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [ ] Other(s)

✔️ I do not have any potential conflict of interest
Case Presentation
48 y.o. male

huge aortic root pseudoaneurysm

post redo aortic surgery
Patient’s history:

- Ascending aortic replacement and AVR for type A aortic dissection.
- Bovine pericardial patch reconstruction for pseudoaneurysm of proximal anastomotic site.
pre-operative CT
pre-operative CT MPR
1st operation in hybrid-OR

under general anesthesia

*12Fr sheath inserted via apex with left mini-thoracotomy

*22 and 12mm AVP2 s were deployed at non-coronary cusp
pseudoaneurysmography
22mm AVP2 deploy
post plug closure
follow-up CT after 1st Op. 12POD
2nd operation in hybrid-OR

under general anesthesia

*transarterial transcatheter hydrocoil embolization for residual leak

*removal of huge hematoma with a right mini-thoracotomy
cone beam CT
post embolization
follow-up CT; 43POD
AVP2s and hydrocoils are nicely positioned
Discussion
approach route

* trans-arterial approach

* trans-septal approach
  --- widely used in ablation and PTMC
  --- well established procedure

* trans-apical approach
  --- recently, widely used in TA-TAVI
Which is the best approach route to aortic root, aortic/mitral valve, LVOT?

*trans-septal?
--- less invasive
--- very long approach route

*trans-apical?
--- slightly invasive
--- very short and linear access route
CONCLUSIONS

Compared to the transseptal approach, the transapical approach provides a shorter and more linear access.

Heart-team transapical approach procedure is an efficient and safe option for transcatheter plug closure.
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