Monitoring result of angiographic and intravascular imaging devices from aneurysmal degeneration to femoropopliteal artery occlusion following PB-DES implantation

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Disclosure

Speaker name: Tatsuya Nakama MD.

I have the following potential conflicts of interest to report:

**Consulting:** Boston Scientific, Century Medical Inc., Medtronic

Employment in industry: None

Stockholder of a healthcare company: None

Owner of a healthcare company: None

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Background

The Eluvia (Boston Scientific, MN, USA) polymer-based paclitaxel-eluting nitinol stents (PB-PESs) has shown favorable durability in recent clinical trials. However, aneurysmal degeneration (AD) has been identified on duplex ultrasound (DUS) after PB-PES implantation\(^1\). The long-term impact of AD remains unclear.

![Graph](image1.png)

**Primary Patency at 12 Months**

- 87% patency at 12 months
- Number at risk: 62, 59, 53, 48, 41

![Image](image2.png)

**Aneurysmal Degeneration of the Arterial Wall in the Superficial Femoral Artery After Eluvia Stent Implantation in 5 Patients**

- 5 cases of aneurysmal change
- Lesion length: 20±12cm
- Calcium: 42%, CTO: 79%

T Bisdas et al. JACC Cardiovasc Interv. 2018
80s male underwent both PB-DES & IWS implantation
3 Follow-up DUS showed “AD”

Admission for FU
- DUS (again)
- Angiogram
- Imaging device
  - IVUS
  - OFDI
  - Endoscopy
No-stent mal-apposition was observed
IVUS findings also showed “Nothing”
OFDI findings also showed “Nothing”
Endoscopic findings showed
“Almost perfect epithelialization”
3 month FU result is completely different BNS

Eluvia 7.0x120, 3M FU
Halo sign was observed in DUS, but no aneurysmal changes

SUPERA 5.5x100, 3M FU
Complete epithelialization
Overlap point: no neointima
Aneurysmal degeneration was observed, but OFDI and Angioscopic finding were similar to coronary DES.
Conclusion

• we speculate that AD after PE-PES implantation may not cause stent mal-apposition, which is a risk factor for stent thrombosis.
• Although AD was observed after PB-drug eluting stent implantation, the stent strut apposition and epithelialization appeared almost perfect.
• Therefore, AD may not be a risk of stent thrombosis itself.
• However, this is only one case report. Accumulation of clinical experiences and evidences should be need.
Thank you for your attention

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