

Type A Aortic Dissection After TAVI

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CASE

- 78/ F, 155cm, 49kg, BMI 20.4
- CC: Chest pain, DOE (NYHA class II)
- Medical history

HTN

Hyperlipidemia

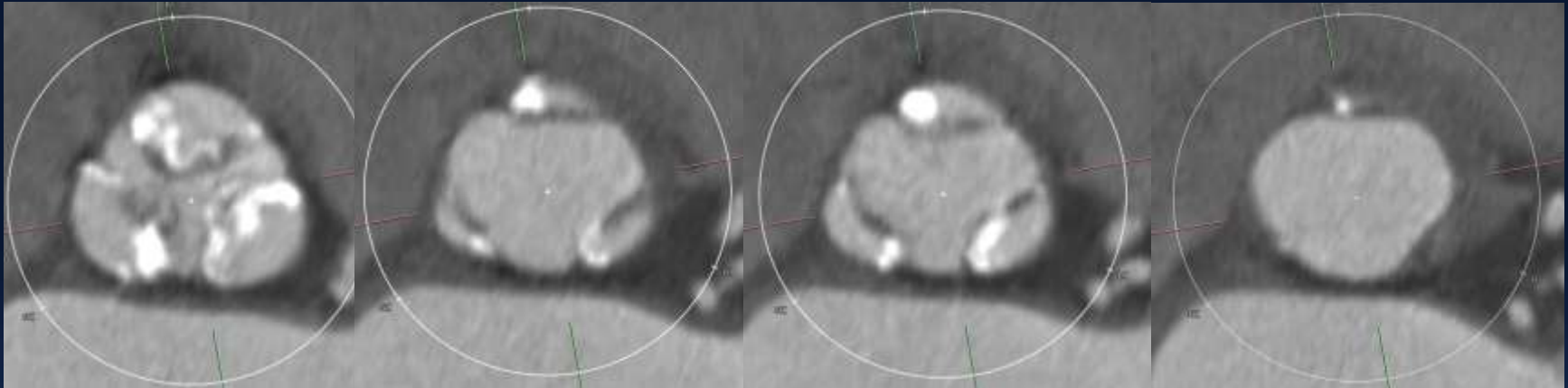
DM

- EuroSCORE = 10.29%, EuroSCORE II = 1.58%
- STS score = 3.12%

Echocardiography

- Tricuspid AV
- AVA = 0.44 cm²,
- Peak / Mean PG = 109 / 78 mm Hg,
- V max= 5.2 m/s
- EF= 42% (hypokinesis in LCX territory)
- Severe AS, mild-moderate MR, mild AR
- ECG : Sinus rhythm, LVH

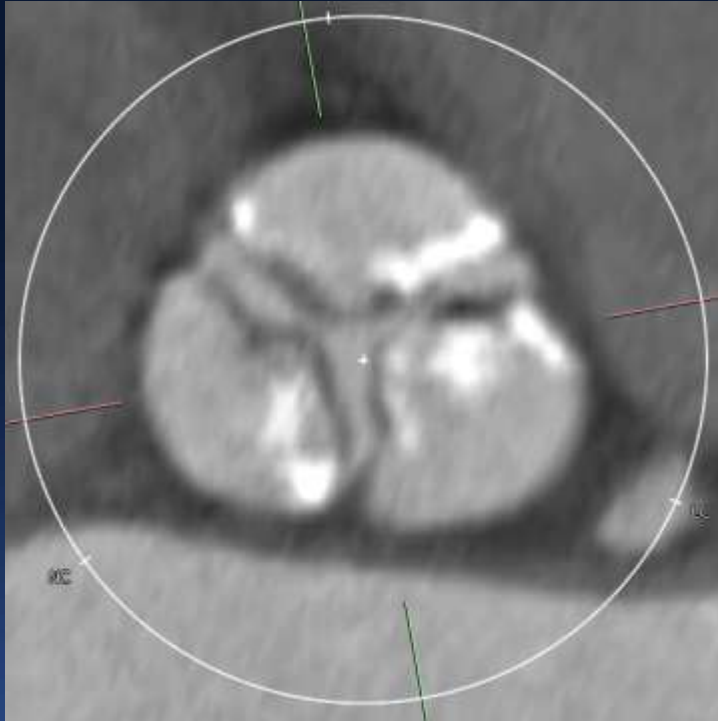
CT findings – Aortic annulus view



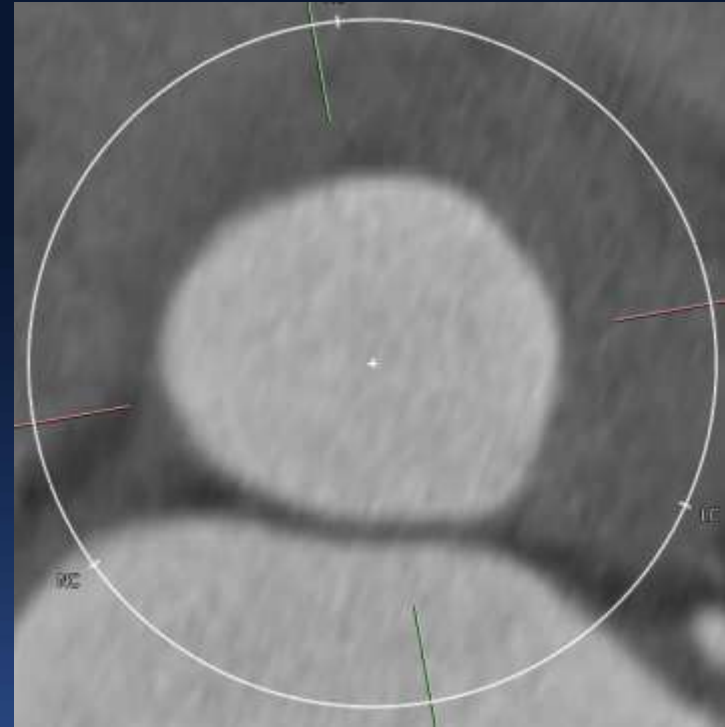
Annulus plane

Aortic Annulus parameters	
Annulus short diameter	21.6 mm
Annulus long diameter	27.4 mm
Annulus mean diameter	24.5 mm
Annulus area	481.6 mm ²
Annulus area-driven diameter	24.8 mm
Annulus perimeter	79.6 mm
Annulus perimeter-driven diameter	25.3 mm

CT findings – Aortic Valve Complex



Width of Sinus
NCC : 29.0 mm
LCC : 31.3 mm
RCC : 27.9 mm



LVOT
Area : 590 mm²
Diameter max : 29.1 mm
Diameter min : 25.1 mm

CT findings – Sizing

Size	Area_oversize (%)	Perimeter_oversize (%)
23	86.2	90.7
24	93.9	94.7
25	101.9	98.6
26	110.2	102.6
27	118.8	106.5
28	127.8	110.5
29	137.1	114.4
30	146.7	118.3
31	156.6	122.3

CT findings – Coronary Height



LCA : 13.8 mm

RCA : 15.2 mm

CT findings – Ileofemoral Angio



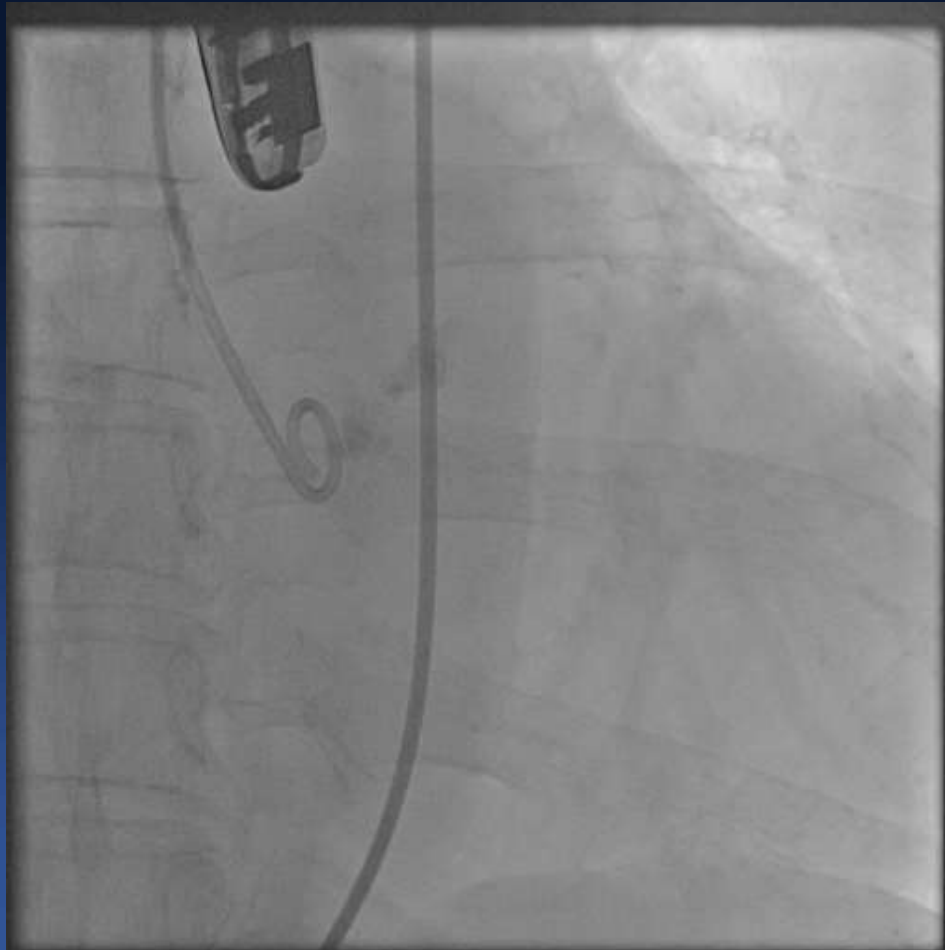
**Minimal diameter
Rt. EIA 6.7 mm**



**Minimal diameter
Lt. EIA 7.0 mm**

TAVI procedure

Baseline Aortogram



Balloon Valvuloplasty



Valve Implantation



Edwards Sapien 26mm

Aortogram



TEE



Post Balloon



Aortogram



TTE



TEE



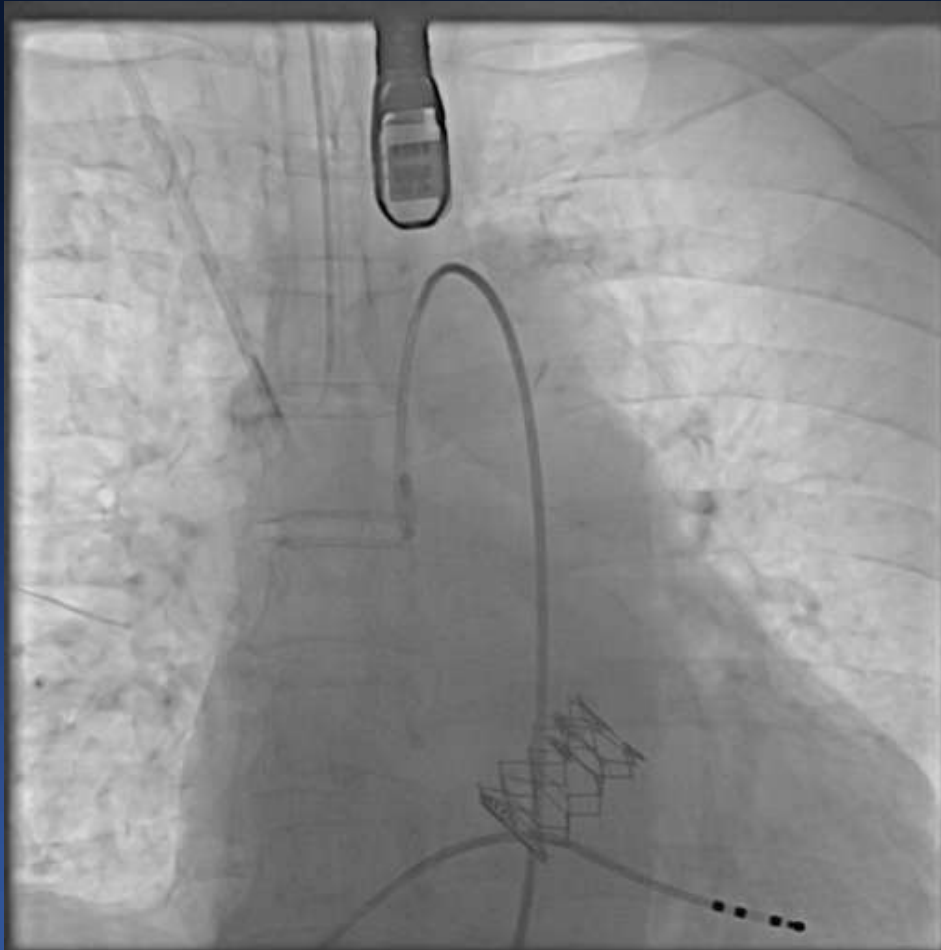
TEE



TEE



Aortogram



How to Treat ?

- 1. Emergent Operation**
- 2. Endovascular Aortic Repair**
- 3. Observation**

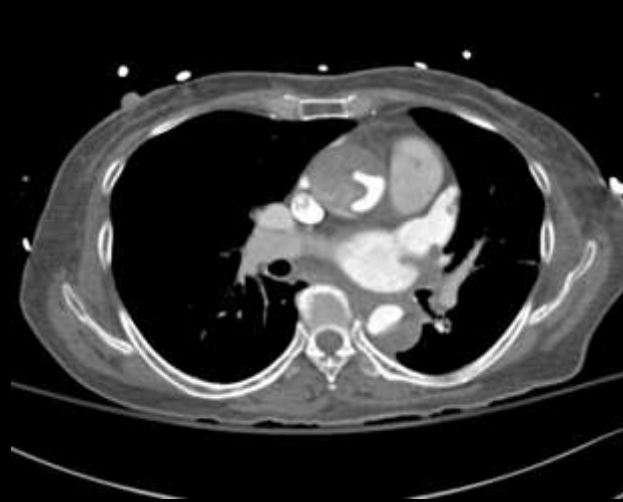
CT



Before TAVI



Immediate After



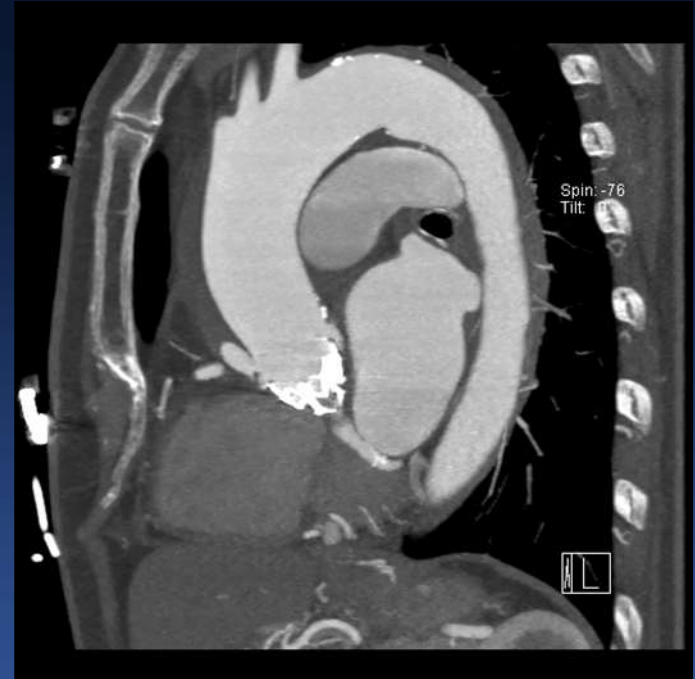
1 week later



2 weeks later



CT after 2 weeks



Patient was discharged without further event

Summary

1. Post-TAVR AR is associated with adverse outcomes, and commonly treated with oversized-device or post-dilation.
2. However, oversized-device and post-dilation increased the risk of aortic root injury (annulus rupture or aortic dissection).
3. We experienced the aortic dissection after TAVR, successfully managed with conservative treatment.
4. Considering the high-risk of patients referred for TAVR, the management of post-TAVR AR should be cautiously considered.