



TAVI Case Presentation Valve Embolization

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Disclosure Statement of Financial Interest

Within the past 12 months, I or my spouse/partner have had a financial interest /arrangement or affiliation with the organization(s) listed below

Affiliation/Financial Relationship	Company
Grant/ Research Support:	
Consulting Fees/Honoraria:	Edwards Lifesciences (consultant & proctor)
Major Stock Shareholder/Equity Interest:	
Royalty Income:	
Ownership/Founder:	
Salary:	
Intellectual Property Rights:	
Other Financial Benefit:	

- 82yo male
- Severe AS – Low Flow Low Gradient
 - NYHA 3 – 4; 2x admission with pulm edema in 6 months
 - Mean gradient 35mmHg, AVA 0.6cm²
 - Cath – Mean grad 33mmHg, AVA 0.7cm², CO 3.7L/min
 - Dobutamine Mean grad 43mmHg, AVA 0.7cm², CO 4.7L/min
- Co-morbidities
 - CAD
 - CABG 1992 - SVG to OM, SVG to RCA; LIMA to LAD
 - Currently only LIMA graft patent
 - Moderate LV systolic dysfunction – EF 35%
 - Cerebrovascular disease - Multiple lacunar infarct
 - Stage 3 CKD – GFR 39ml/min
- Logistic Euroscore 36%; STS score 11.2%
- Echo (TTE & TEE) – Annulus 24mm
- Cath – tortuous R peripherals; L peripheral calcified but straighter, measuring >8mm; Dilated ascending Ao



Plan

- Transfemoral TAVI
 - Left femoral
- Edwards SAPIEN THV 26mm
- RF1 system

Edwards Transfemoral Delivery System Refinement



RetroFlex 1 System

- Balloon-expandable transcatheter valve delivery
- Steerable catheter
- No nose-cone
- THV tends to migrate aortic on deployment
- 22-24F sheath



RetroFlex 3 System

- Balloon-expandable transcatheter valve delivery
- Steerable catheter
- Tapered distal end
- More accurate valve deployment (less aortic migration on deployment)
- 22-24F sheath



NovaFlex System

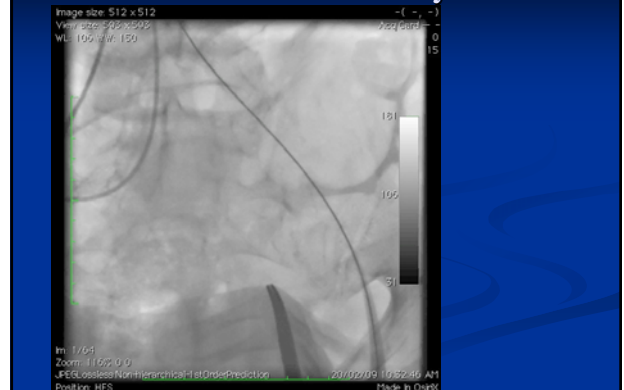
- Balloon-expandable transcatheter valve delivery
- Steerable catheter
- Tapered distal end
- More accurate valve deployment
- Valve crimped on shaft and aligned to balloon upon exit from sheath
- Combined with SAPIEN XT valve → 18-19F sheath



Procedure

- General anesthesia; TEE guidance
- 26mm Edwards SAPIEN valve prepared & crimped
- 24F sheath inserted to L common femoral artery
 - Preclosure using 3x Proglide Perclose devices
- 6F pacing wire to RV apex

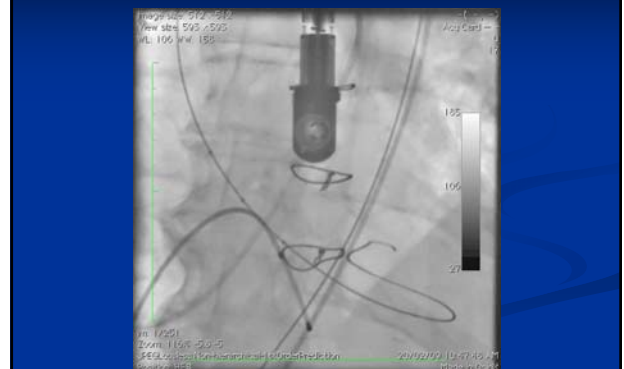
24Fr sheath entry

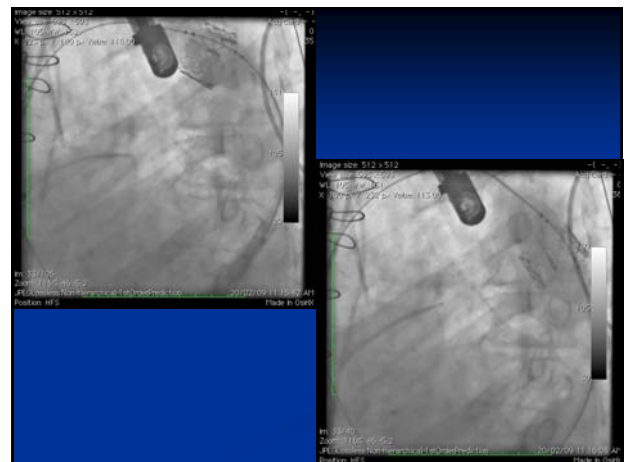
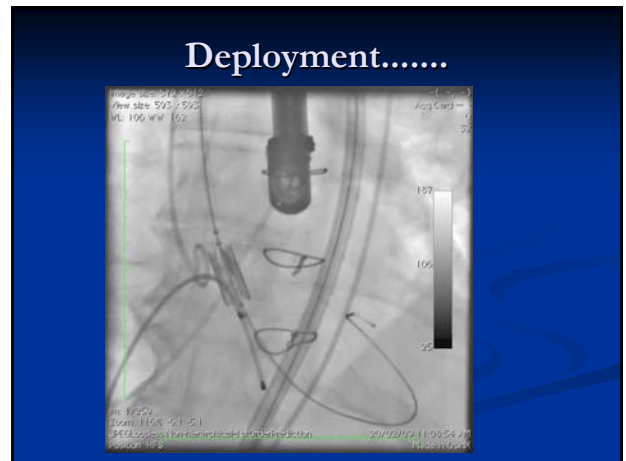
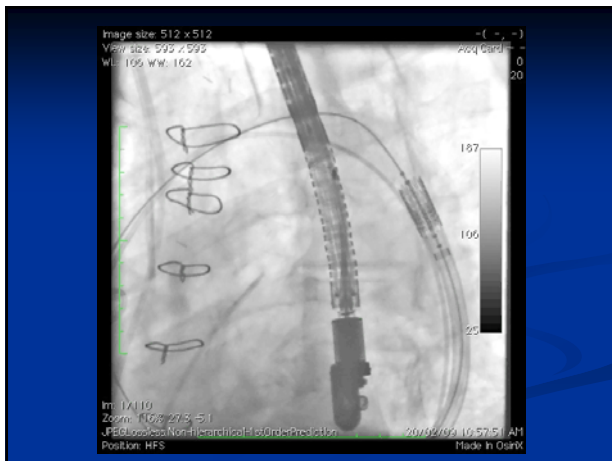


Rapid pacing issue

- 200bpm – 2:1 capture only
- 180bpm – VT/VF
- 160bpm – 1:1 capture. OK pressure drop

BAV – Nucleus balloon 22mm





Diagnosis of reason for embolization

- Inadequate pressure drop on 160bpm rapid pacing
- Inappropriate valve deployment projection plane
- Deployment at commissure

Valve in descending aorta

