

# **TRANSCAVAL ACCESS FOR TAVI**

**MORITZ SEIFFERT** 





### Disclosure

Speaker name:

#### **Moritz Seiffert**

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 with regard to this presentation



### Case: Patient history

79 y/o male patient with severe low-flow low gradient aortic stenosis Hospital admission with cardiac decompensation (NYHA IV)

#### Past medical history:

- Ischemic cardiomyopathy (LV ejection fraction 25%)
- ICD-CRT (with epicardial lead)
- Coronary artery disease, s/p multiple PCI
- Chronic renal failure (hemodialysis)
- Peripheral artery disease
- S/p stroke with residual hemiparesis of right arm
- COPD
- Pulmonary hypertension



STS-PROM: 14.5% Log ES: 35.2%



#### Case: Multimodality imaging

#### Low-flow low-gradient AS





Annulus – RCA: 16.8 mm

C-arm angulation LAO 15/CRAN 3









Evolut R 29 mm



#### Case: CT evaluation of access options



Transcaval access for TAVI

AORTIC

In addition: No transapical or transaortic options

### Case: Identification of calcium-free target





CT planning to identify calcium-free target near IVC without obstacles (e.g. bowel, jeopardized vascular structures)



### Case: Alignment of crossing system



- Gooseneck snare catheter in abdominal aorta to target
- Coaxial crossing system
  (Confianza Pro 12, microcatheter, stearable guiding catheter) in IVC
- Align crossing system and snare in orthogonal projection



#### Case: Crossing and snarring









- Electrified wire crossing from IVC into aorta
- Snarring of the wire into the aorta, advancement of the microcatheter and exchange for a stiff wire





Transcaval access for TAVI

Operators: U. Schäfer, J. Schirmer, N. Tsilimparis

Greenbaum AB et al. JACC 2017 8 Lederman RJ et al. JACC Cardiovasc Intv 2017

## Case: Sheath advancement and TAVI





#### Case: Transcaval closure with duct occluder





### Background on transcaval access for TAVI

- Prospective evaluation in 100 patients without alternative access for TAVI (mean STS-PROM 9.6%)
- Transcaval access successful in 99/100 patients
- Successful access closure in 98/99 patients
- Implantation of covered aortic stents in 8.1%
- Retroperitoneal bleeding in 12.1% (life-threatening, major)
- Corelab-adjudicated retroperitoneal hematomas on routine CT scans in 24% of patients at discharge
- 30-day survival 92%

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#### Transcaval Access and Closure for Transcatheter Aortic Valve Replacement

#### A Prospective Investigation

Adam B. Greenbaum, MD,<sup>a</sup> Vasilis C. Babaliaros, MD,<sup>b</sup> Marcus Y. Chen, MD,<sup>c</sup> Annette M. Stine, RN,<sup>c</sup> Toby Rogers, PhD, BM BCH,<sup>c</sup> William W. O'Neill, MD,<sup>a</sup> Gaetano Paone, MD,<sup>a</sup> Vinod H. Thourani, MD,<sup>b</sup> Kamran I. Muhammad, MD,<sup>d</sup> Robert A. Leonardi, MD,<sup>e</sup> Stephen Ramee, MD,<sup>f</sup> James F. Troendle, PhD,<sup>c</sup> Robert J. Lederman, MD<sup>c</sup>





## Case summary: transcaval access for TAVI

- Transcaval access a feasible percutaneous approach for TAVI
- First clinical data support <u>cautious</u> clinical adoption in experienced hands in patients without good alternative access options
- Complexity and potential complications (retroperitoneal bleeding, need for aortic stent implantation) limit its routine clinical use
- With well-established transfemoral, transaxillary, transapical, transaortic approaches, transcaval remains a "niche" access at current









