TAVI „bez cévního přístupu“

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Krajská zdravotní a.s., Masarykova nemocnice v Ústí nad Labem o.z

a UJEP Ústí nad Labem

(XXVI sjezd ČKS, 6,-9.5. 2018, Brno)

TAVI bez cévního přístupu…

➢ Anamnéza

- *muž, 74 let*
- *DM II. typu na PAD s komplikacemi (makro i mikroangiopatie)*
- *Arteriální hypertenze II-III WHO*
- *HLP na statinu*
- *CHOPN II.-III. st., těžká obstrukce, VC redukovaná, transfer faktor pro CO stř. snížen*
- *Stp. náhradě levého kyčelního kloubu 2005*

- *ICHS – stp. Q IM spodní stěny 1999, stp. chirurgické revaskularizaci (LIMA-RIA, AKB RMS3, RD) s revizí pro dehiscenci rány 2000*
- *Paroxysmální fibrilace síní*
- *ICH tepen DK-stp. F-P bypassu bilat., stp. PTA + stent AIC l.sin. 2008, obliterace AFS a trombóza F-P bypassu l.sin.*
- *Uzávěr ACI l.dx. staršího data, vlevo na ACI nevýznamná stenóza*

TAVI bez cévního přístupu…

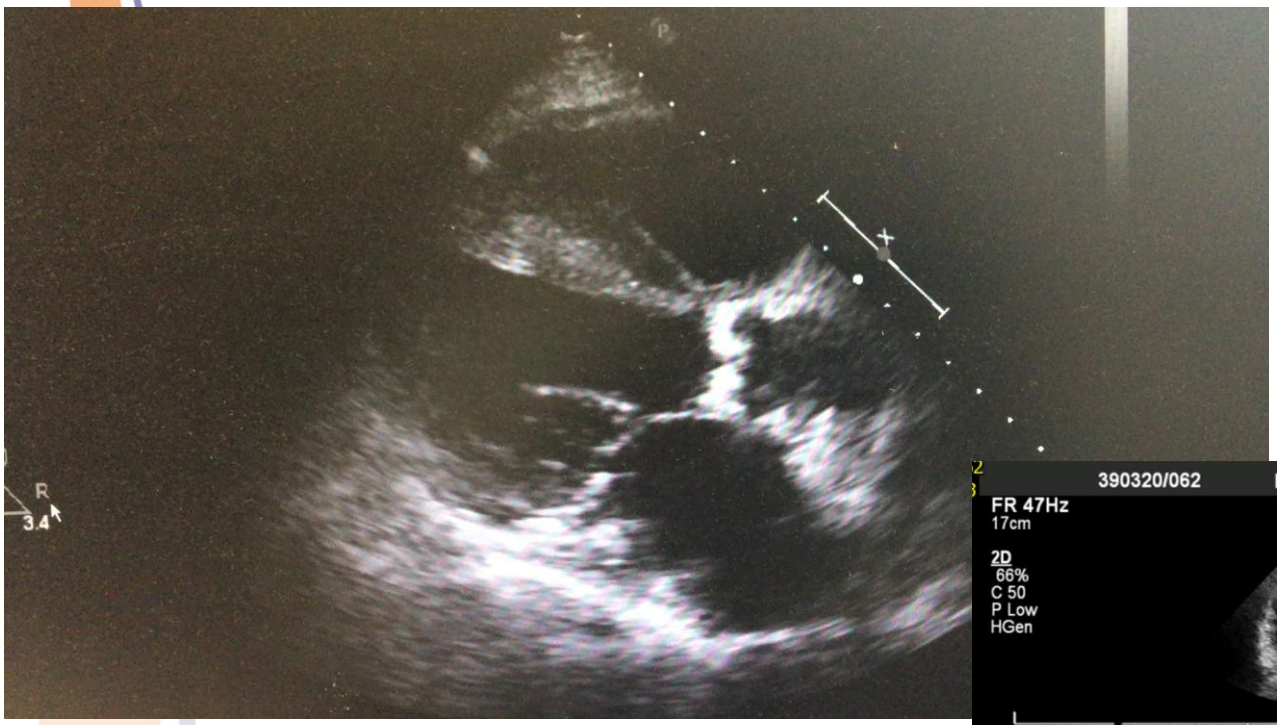
➢ Anamnéza

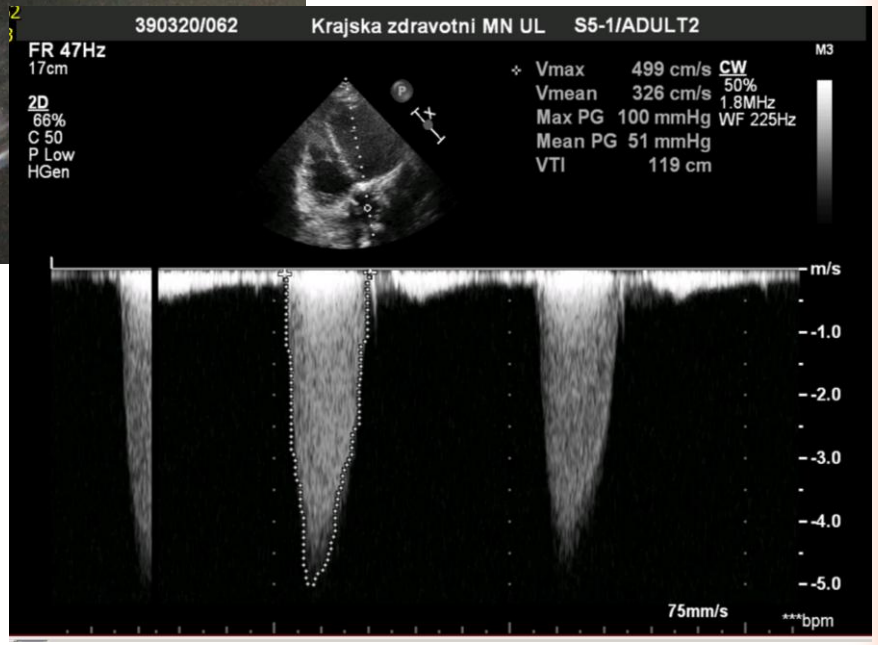
- od r 2009 sledován pro Ao vadu
- 6/2016 hosp. pro levostranné srdeční slehávání

➢ RTG SaP

TAVI bez cévního přístupu…

➢ TTE



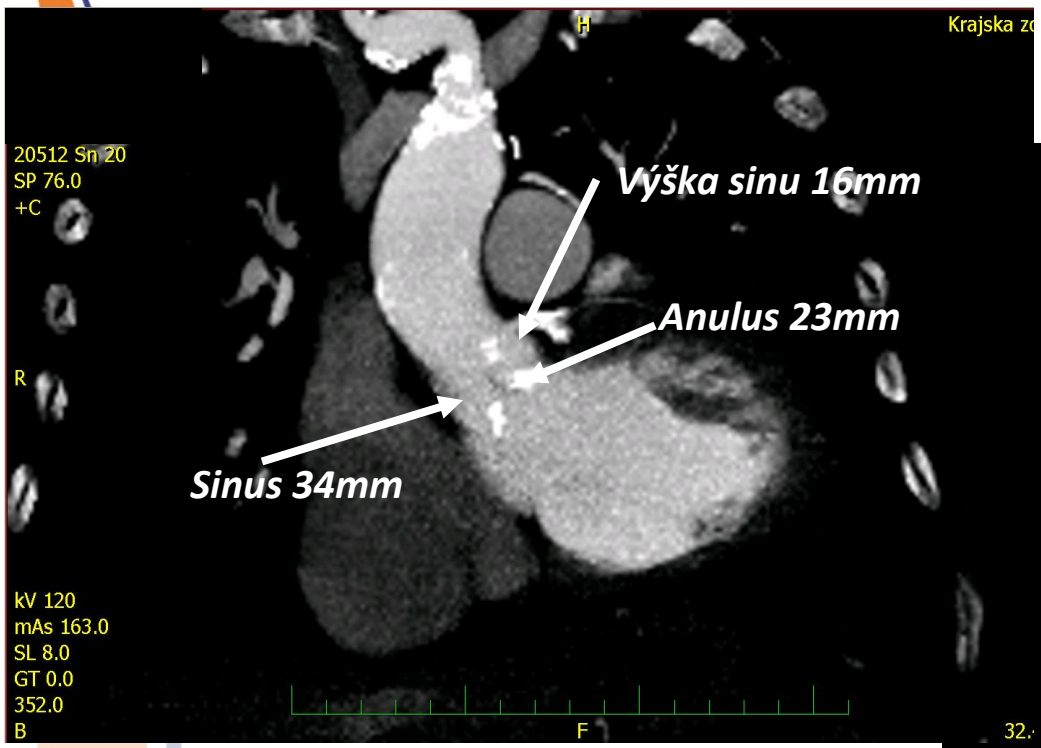


- *Významná, kalcifikovaná Ao vada s převahou stenózy*
- *Dilatace všech srd. oddílů*
- *Středně závažná mi regurgitace*
- *Středně závažná plicní hypertenze*
- *EF 35-40%*

TAVI bez cévního přístupu…

- **SKG**

TAVI bez cévního přístupu…



➢ ***CT angio***

Vpravo *AIC uzavřena od odstupu, AIE dif. sklerotická, bez význ. stenózy. AFC a APF bez stenóz. Průměr 3x5mm. AFS uzavřena. FP bypass průchodný, bez stenóz. Mnohočetné stenózy bércových tepen.*
Vlevo *AIC a AIE dif. sklerotické, cirkulární kalcifikace, stenózy 50%, AFC a APF prům. 3,5x5mm. AFS uzavřena od odstupu, FP bypass uzavřen. Polystenotiké bércové tepny.*

TAVI bez cévního přístupu…

➢ Pro rozhodování „ heart teamu“

- *urea 9,8 mmol/l; clearance kreatininu 49ml/min (C-G)*
  - *Leu 8,8 Ery 4,87 Hb 138 g/l PLT 159*

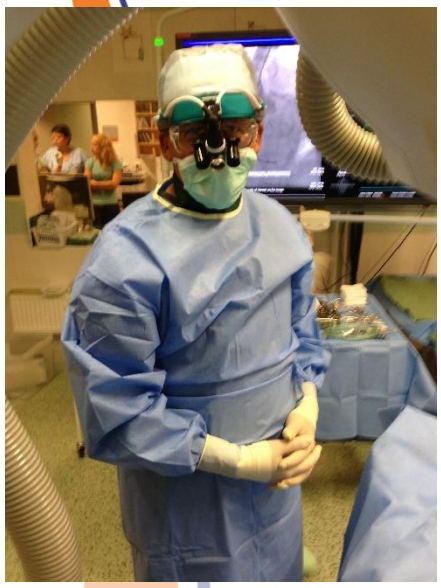
- ***EuroScore I: 53,9%***
- ***EuroScore II 19,81%***
- ***STS score: 39,3%***

TAVI bez cévního přístupu…

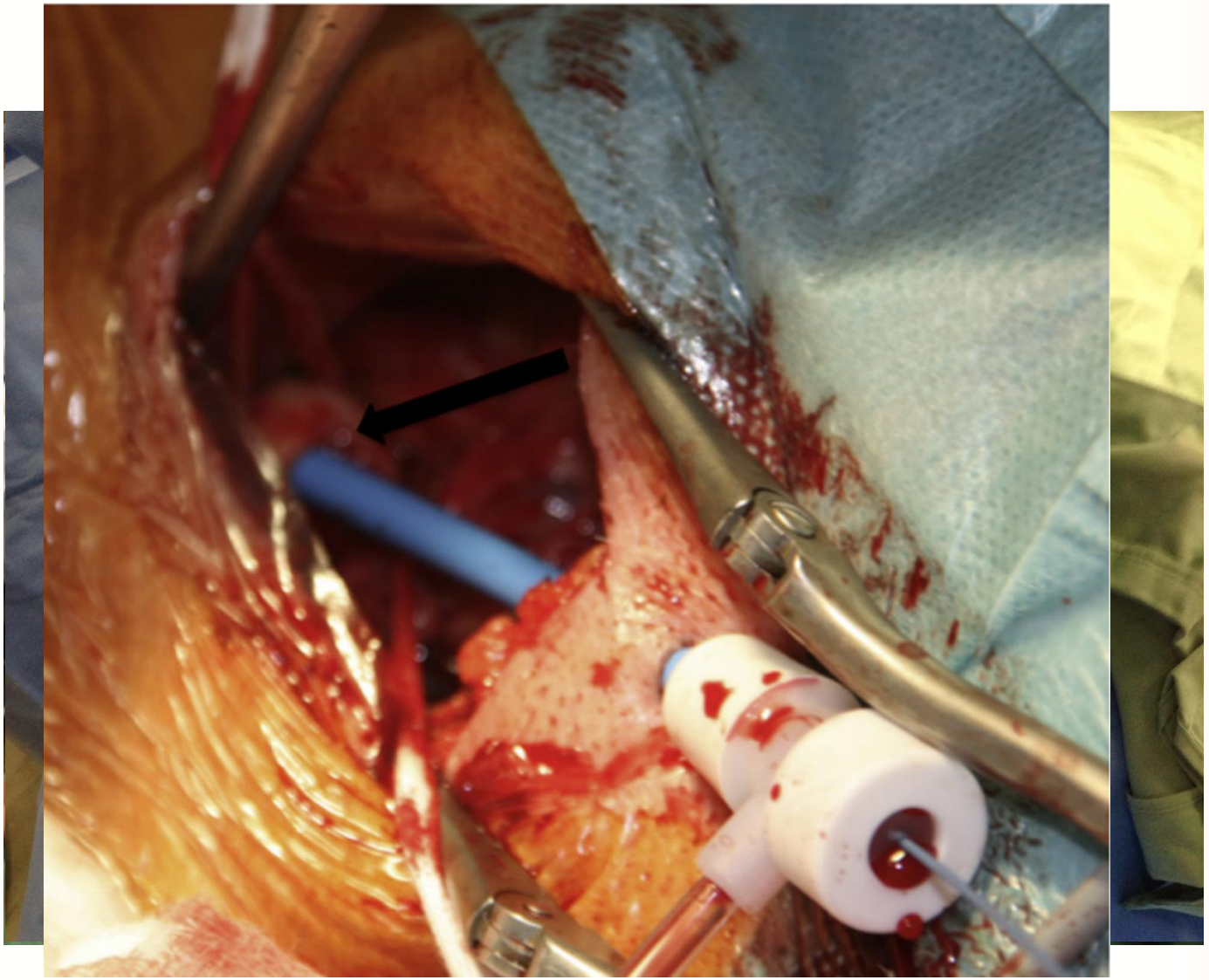
- **Rozhodnutí heart teamu MN UL:**

  - *TAVI levostranným subclaviálním přístupem*

TAVI bez cévního přístupu…

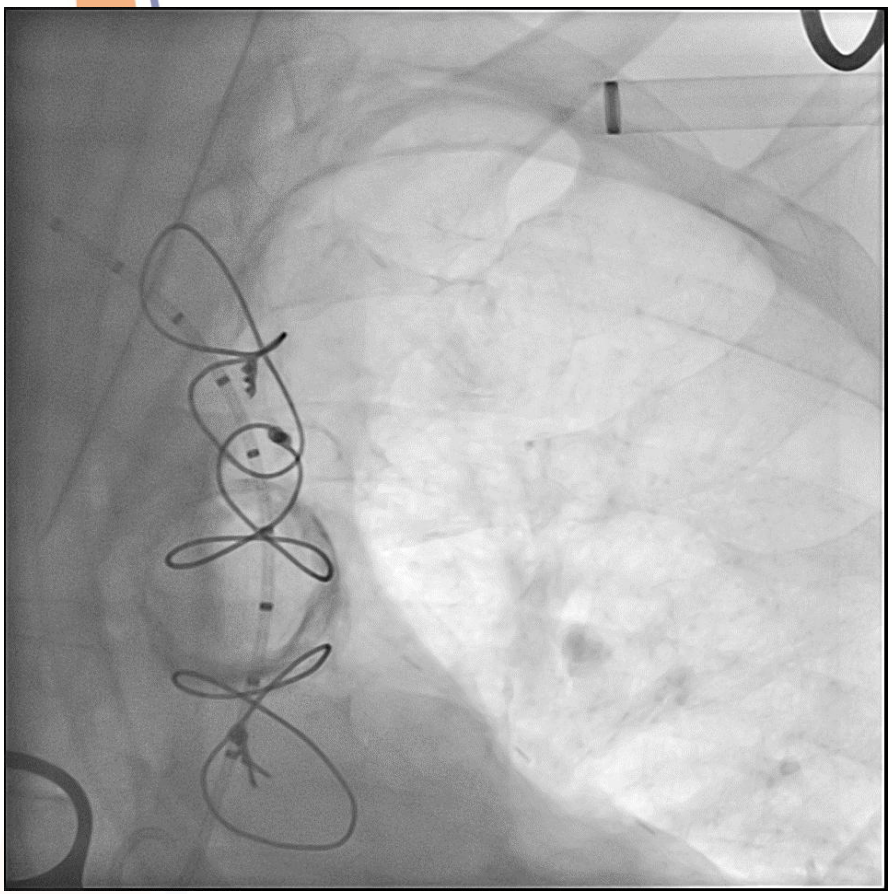


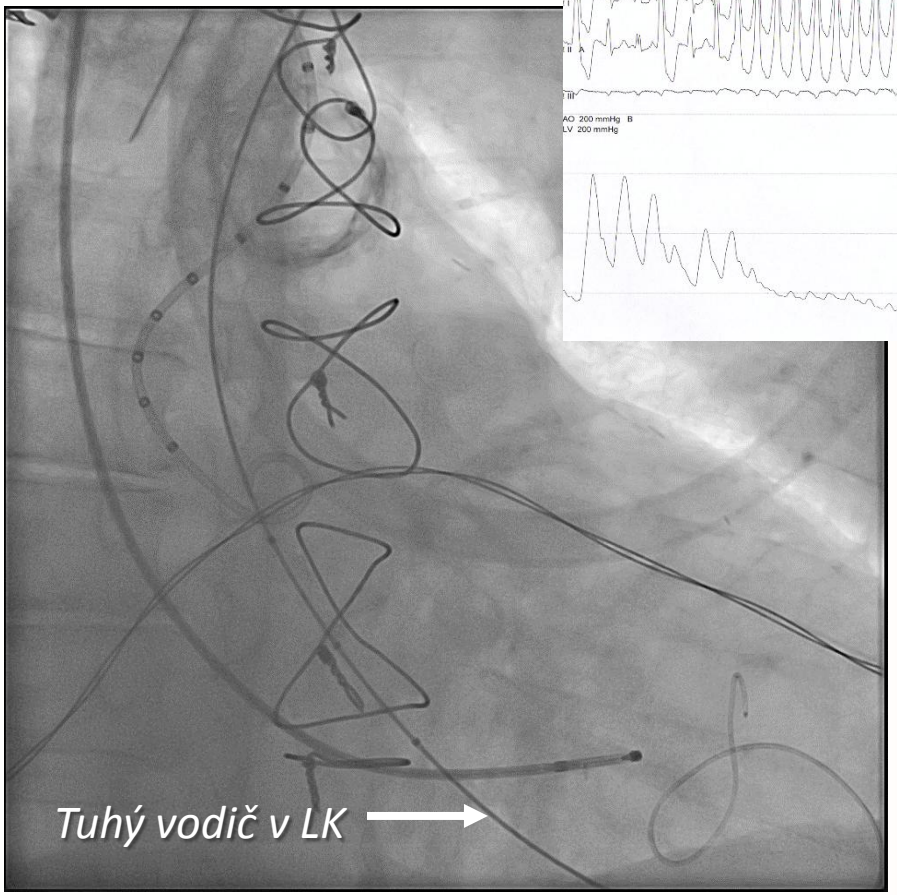
- TAVI 9/2013; výkon v CA



TAVI bez cévního přístupu…

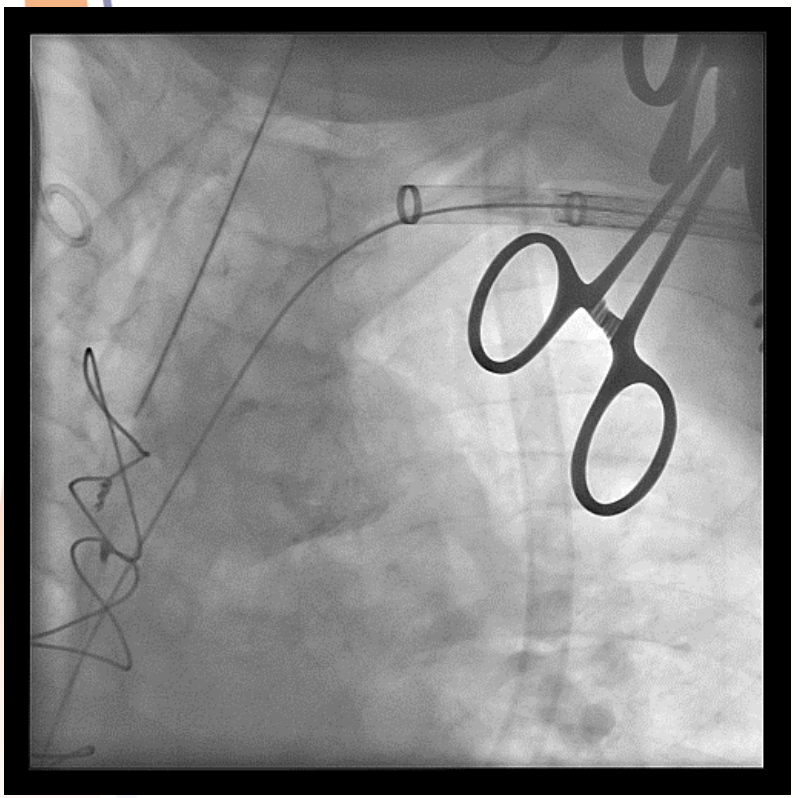
- *18 F zavaděč*
- *BAV, Nucleus 25/40mm, 180/min*

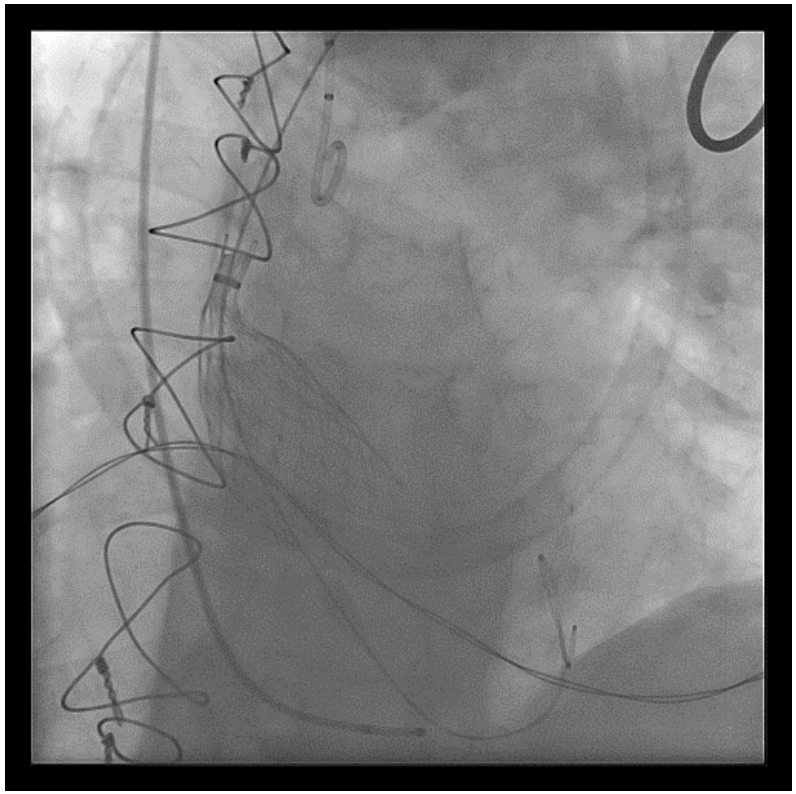




TAVI bez cévního přístupu…

- *CoreValve 29 mm*





TAVI bez cévního přístupu…

- *Hospitalizace 10 dnů*

TAVI bez cévního přístupu…

- **Přístupy**

Propensity-Matched Comparisons of Clinical Outcomes After Transapical or Transfemoral Transcatheter Aortic Valve Replacement

A Placement of Aortic Transcatheter Valves (PARTNER)-I Trial Substudy

Eugene H. Blackstone, MD; Rakesh M. Suri, MD, DPhil; Jeevanantham Rajeswaran, PhD; Vasilis Babaliaros, MD; Pamela S. Douglas, MD; William F. Fearon, MD; D. Craig Miller, MD; Rebecca T. Hahn, MD; Samir Kapadia, MD; Ajay J. Kirtane, MD, SM; Susheel K. Kodali, MD; Michael Mack, MD; Wilson Y. Szeto, MD; Vinod H. Thourani, MD; E. Murat Tuzcu, MD; Mathew R. Williams, MD; Jodi J. Akin, MSN; Martin B. Leon, MD; Lars G. Svensson, MD, PhD

Background—The higher risk of adverse outcomes after transapical (TA) versus transfemoral (TF) transcatheter aortic valve replacement (TAVR) could be attributable to TA-TAVR being an open surgical procedure or to clinical differences between TA- and TF-TAVR patients. We compared outcomes after neutralizing patient differences using propensity score matching.

Methods and Results—From April 2007 to February 2012, 1100 Placement of Aortic Transcatheter Valves (PARTNER)-I patients underwent TA-TAVR and 1521 underwent TF-TAVR with Edwards SAPIEN balloon-expandable bioprostheses. Propensity matching based on 111 preprocedural variables, exclusive of femoral access morphology, identified 501 well-matched patient pairs (46% of possible matches), 95% of whom had peripheral arterial disease. Matched TA-TAVR patients experienced more adverse procedural events, longer length of stay (5 versus 8 days; $P<0.0001$), and slower recovery (New York Heart Association class I, 31% versus 38% at 30 days, equalizing by 6 months at 51% versus 47%); stroke risk was similar (3.4% versus 3.3% at 30 days and 6.0% versus 6.7% at 3 years); mortality was elevated for the first 6 postprocedural months (19% versus 12%; $P=0.01$); but aortic regurgitation was less (34% versus 52% mild and 8.9% versus 12% moderate to severe at discharge, $P=0.001$; 36% versus 50% mild and 10% versus 15% moderate to severe at 6 months, $P<0.0001$).

Conclusions—The likelihood of adverse periprocedural events and prolonged recovery is greater after TA-TAVR than TF-TAVR in vasculopathic patients after accounting for differences in cardiovascular risk factors, although stroke risk is equivalent and aortic regurgitation is less. As smaller delivery systems permit TF-TAVR in many of these patients, we recommend a TF-first access strategy for TAVR when anatomically feasible.

Clinical Trial Registration—URL: http://www.clinicaltrials.gov. Unique identifier: NCT00530894.

(*Circulation*. 2015;131:1989-2000. DOI: 10.1161/CIRCULATIONAHA.114.012525.)

Key Words: aortic valve insufficiency ■ mortality ■ propensity score ■ stroke ■ transcatheter aortic valve replacement

European Heart Journal – Cardiovascular Imaging (2014) **15**, 1168–1176
doi:10.1093/ehjci/jeu103

Regional left ventricular function after transapical vs. transfemoral transcatheter aortic valve implantation analysed by cardiac magnetic resonance feature tracking

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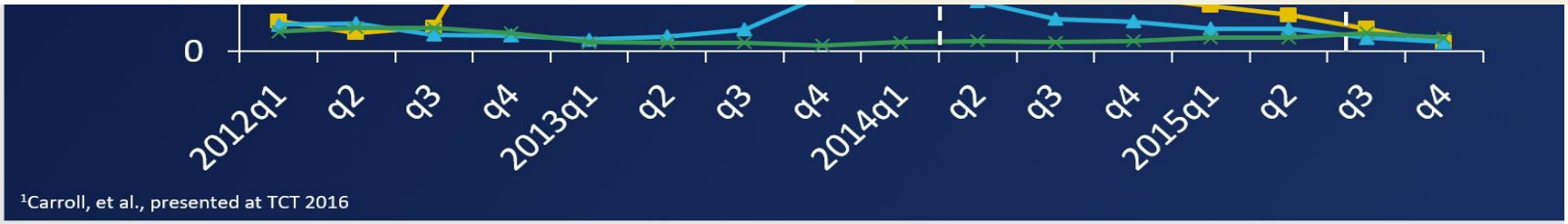
Received 2 October 2013; accepted after revision 1 May 2014; online publish-ahead-of-print 6 June 2014

Aims This study analysed the impact of transapical (TA) vs. transfemoral (TF) access site transcatheter aortic valve implantation (TAVI) on post-procedural regional left ventricular (LV) function using cardiac magnetic resonance (CMR) feature tracking (FT).

Methods and results CMR was performed 3 months after TAVI on 44 consecutive patients with normal LV ejection fraction prior to TAVI. Twenty patients had TA-TAVI, and 24 had TF-TAVI. Standard cine imaging was performed in three standard cardiac long-axis views (two-, four- and three-chamber views). Myocardial peak systolic radial strain (PSRS) and peak systolic longitudinal strain (PSLS) were analysed based on CMR-FT considering 49 segments in each of the three views. There were no differences in PSRS and PSLS for the basal and mid-ventricular segments between TA- and TF-TAVI groups. In contrast, PSRS and PSLS of apical segments and apical cap were reduced in the TA- compared with the TF-TAVI group (PSRS: 15.7 ± 6.4 vs. $35.9 \pm 15.7\%$, respectively, $P < 0.001$; PSLS: -8.9 ± 5.3 vs. $-16.9 \pm 4.3\%$, respectively, $P < 0.001$). Comparison of all non-apical segments vs. apical segments and apical cap demonstrated no difference in the TF group (PSRS: 34.6 ± 9.0 vs. $35.9 \pm 15.7\%$; respectively, $P = 0.702$; PSLS: -17.8 ± 4.6 vs. $-16.9 \pm 4.3\%$; respectively, $P = 0.802$). After TA-TAVI, PSRS and PSLS of the apical segments were reduced compared with the non-apical segments (PSRS: 15.7 ± 6.4 vs. $33.5 \pm 7.0\%$, respectively, $P < 0.001$; PSLS: -8.9 ± 5.3 vs. $-15.5 \pm 3.5\%$, respectively, $P < 0.001$).

Conclusion Apical LV function abnormalities can be detected at 3-month follow-up in all TA-TAVI patients using CMR-FT. TA-TAVI results in significant impairment of apical LV function compared with TF-TAVI.

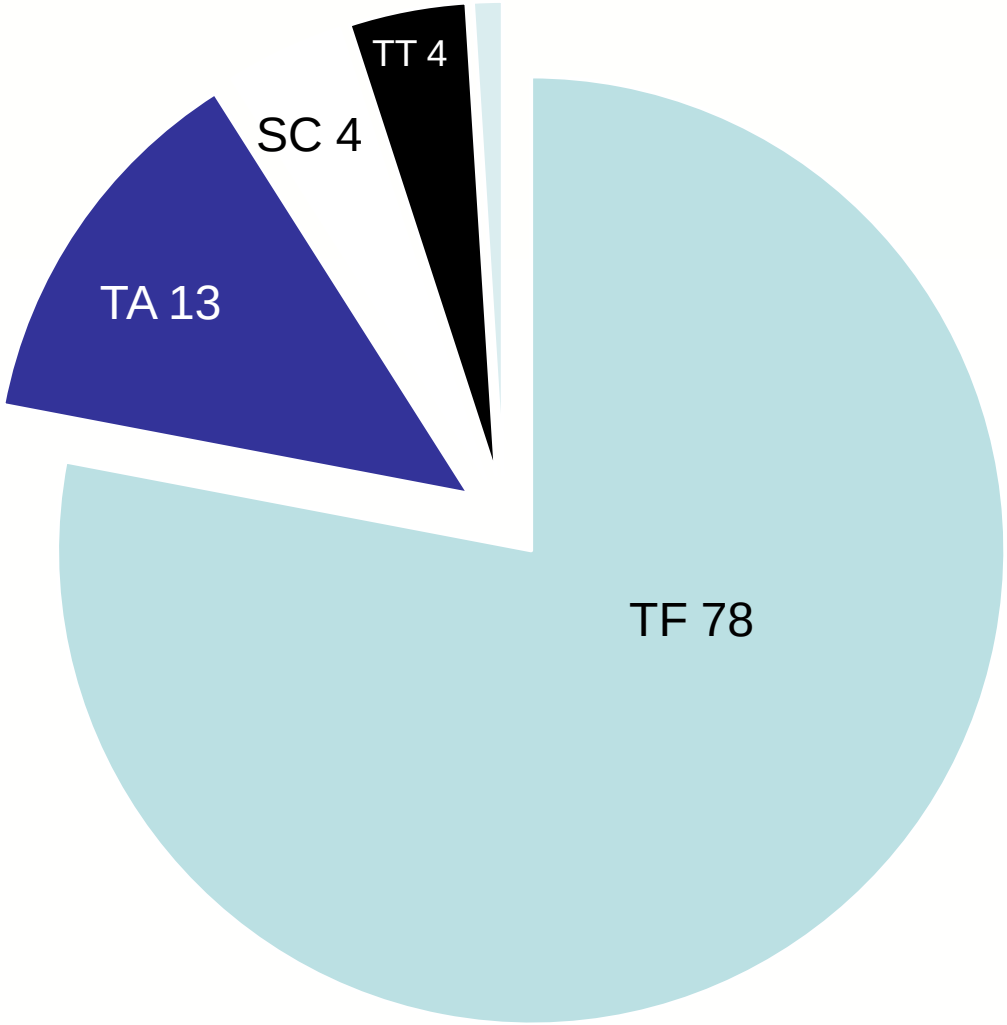
Keywords Aortic valve stenosis • Cardiac magnetic resonance imaging • Feature tracking • Transcatheter aortic valve implantation • Ventricular function



[1]Carroll, et al., presented at TCT 2016

TAVI bez cévního přístupu…

- **Český registr TAVI 2016: přístup**



Jak katetrizačně implantovat chlopeň…

- **TAVI: „Úzká mezioborová spolupráce “**

TAVI bez cévního přístupu…

„Minimalistický přístup k TAVI“

- *Lokální umrtvení + analgosedace (anesteziolog na sále)*
- *Stimulační elektroda ve VJ*
- *Perkutánní přístup+uzávěr místa vpichu*
- *TTE dle potřeby (komplikace)*

TAVI bez cévního přístupu…

➢ K zapamatování:

- **Většina TAVI (>90%) se provádí TF přístupem (a poroste):**

  - *zdokonalování instrumentaria*
  - *mininimalistický přístup k TAVI*
  - *nižší mortalita ve srovnání s TA*

- **Alternativní přístupy při nemožnosti TF:**

  - *transapikální*
  - *subclaviální*
  - *transaortální*
  - *transkarotický*


Děkuji za pozornost
B

20.7. 1969; první krok Neila Armstronga na měsíci

"That's one small step for a man; one giant leap for mankind."