Case Presentation – “What would you do?”

Paul Petrasek, MD MHCM FRCSC
Peter Lougheed Centre

Winnipeg Vascular and Endovascular Symposium
April 2025

Disclosure: I have no relationship with commercial entities

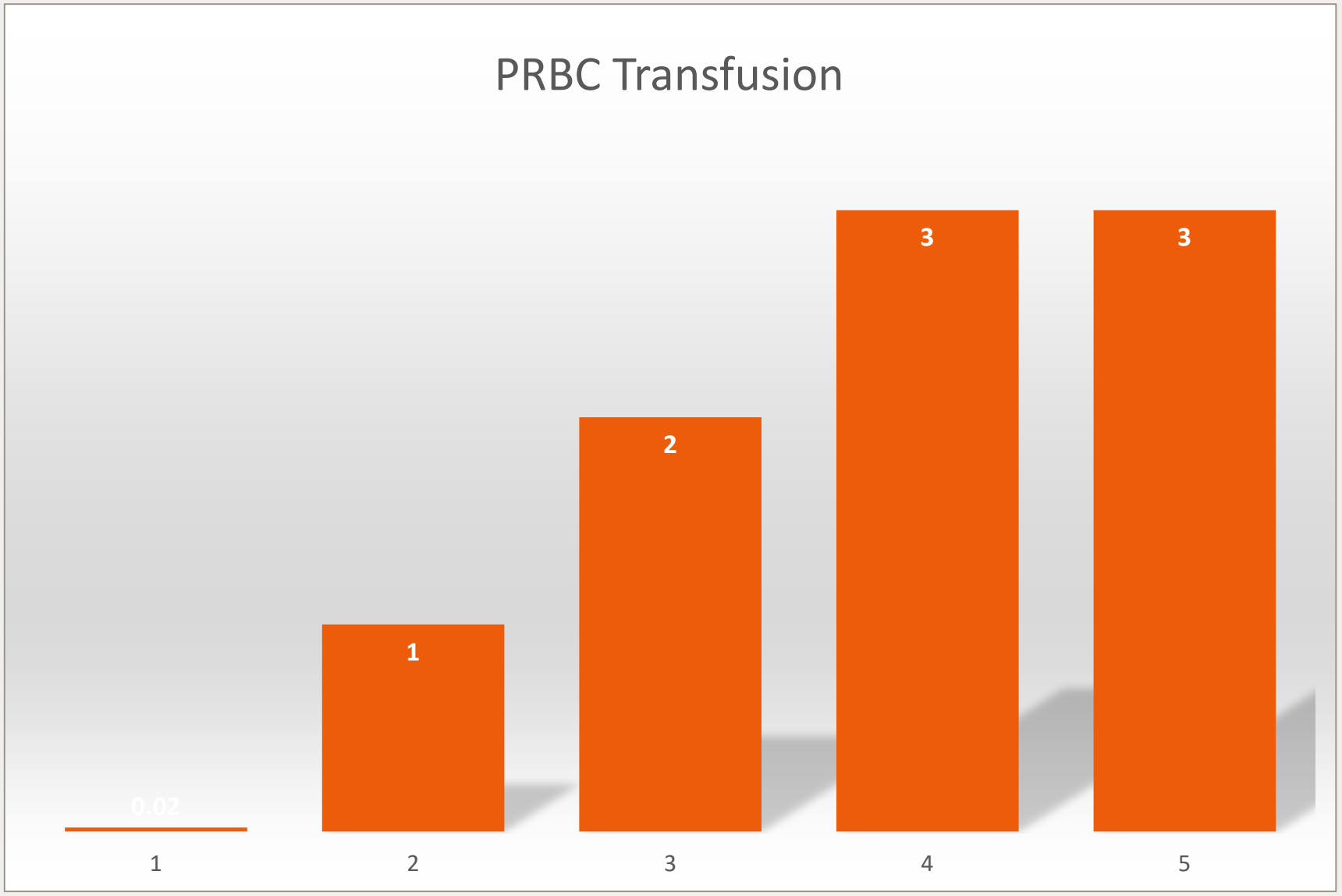
53-year-old Female:

- *ESRD on hemodialysis, Type 2 DM, previous stroke*
- *BMI=45, current smoker*
- *previous right BKA (revised x2), previous left toe amputations*
- *Intertrochanteric right hip fracture, October 2024*

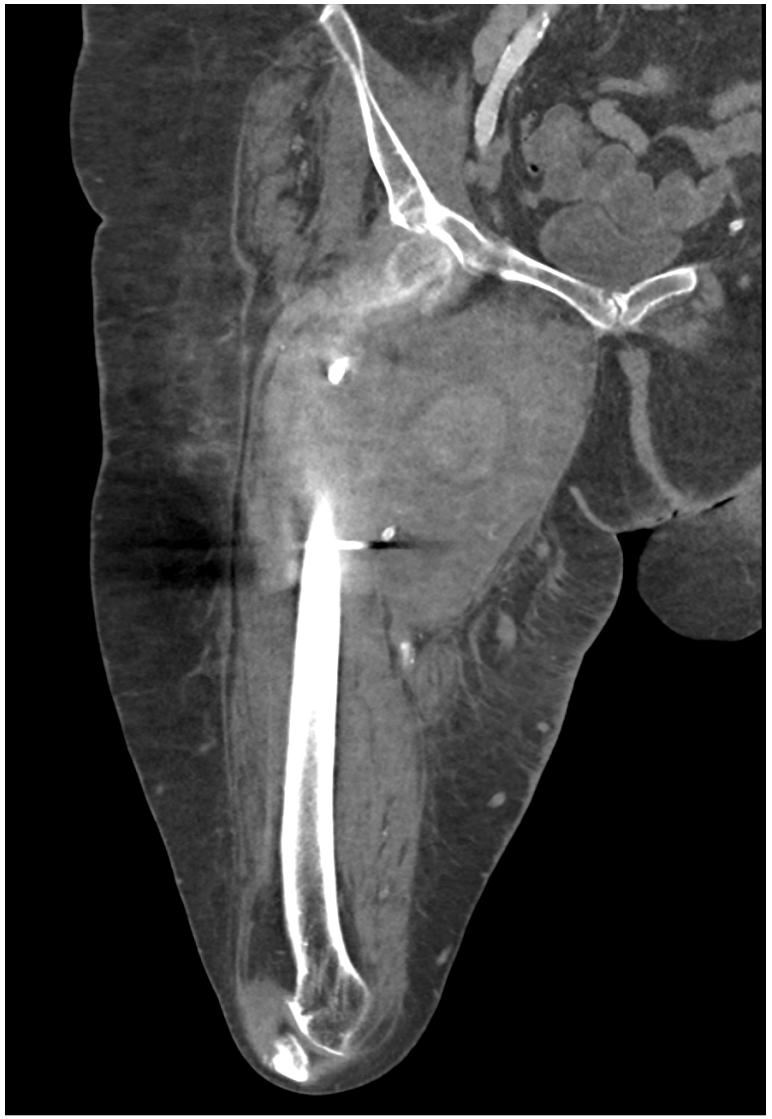

R
HO
RIE
ED
RT/VS
14
1
(20:49)
25

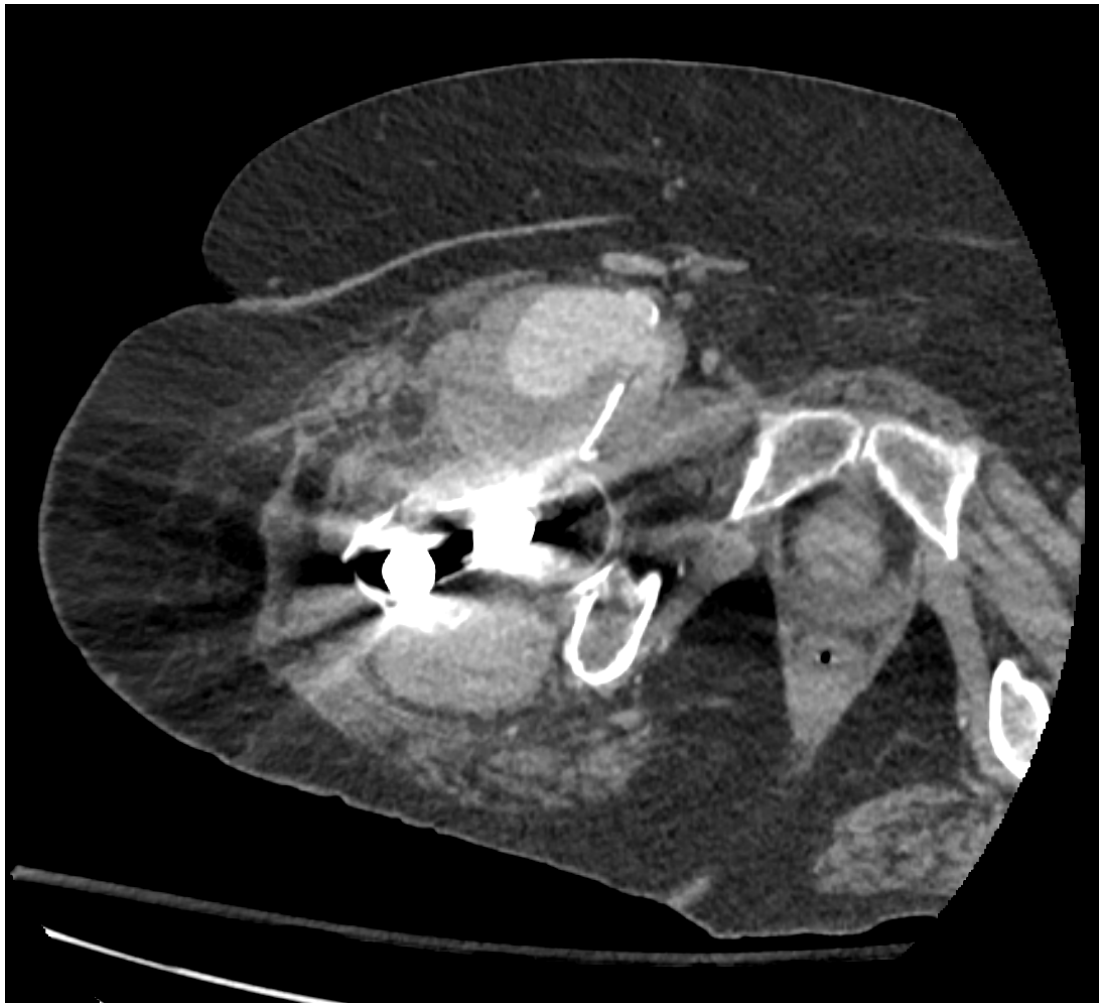
Post-op course:

- *5-month LOS, awaiting permanent assisted living placement, due to very high care needs*
- *Refractory anemia, despite darbepoetin and iron*
  - *9U PRBC since admission*
- *Persistent right thigh pain requiring high-dose narcotics*


PRBC Transfusion
0.02
1
2
3
3
1
2
3
4
5
Months since admission


HO
RIE
ED
RT/VS
14
1
(20:49)





Vascular Surgery first contact (04:17 AM):

- *Hemodynamically stable*
- *Massively swollen thigh (non-pulsatile), viable BKA stump*
- *Unable to find femoral pulse under very large abdominal pannus*
- *Hb 60 (was 69, 3hr. earlier, prior to transport to Calgary)*
- *c/o pain +++*

Live Poll: What would you do?

1. *Femoral cut-down with suture or patch repair*
2. *Expose iliac artery for proximal clamp, then femoral artery repair*
3. *Iliofemoral bypass (retroperitoneal or laparotomy)*
4. *Proximal control using balloon control, then femoral repair*
5. *Stent graft repair*

Think different.

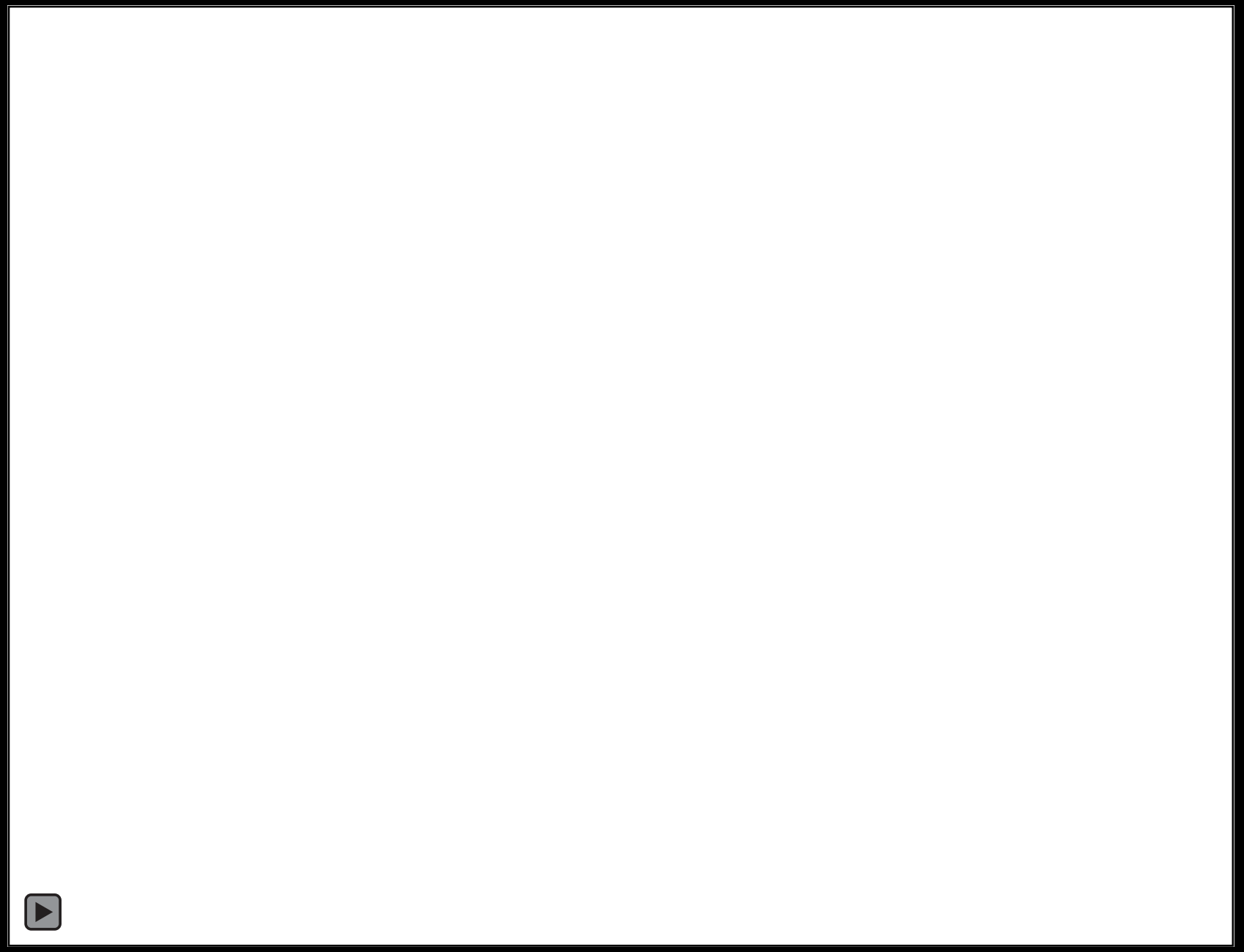

Post-intervention:

- *Pain gone*
- *Palpable popliteal pulse*
- *Hb stable without need for further transfusion*

Live Poll: What would you do after endovascular repair?

1. *Pseudoaneurysm drainage/debridement and removal of bone fragment*
2. *Delayed debridement + iliofemoral bypass because femoral stents always fail*
3. *CTA in a few days, then decide surgery vs. continued observation*
4. *Enjoy the win, send back to referring hospital before a complication occurs*

2 Months Post-stent



Predictive Factors of Complications After Surgical Repair of Iatrogenic Femoral Pseudoaneurysms

Gabriele Piffaretti, Giovanni Mariscalco, Matteo Tozzi, Nicola Rivolta, Patrizio Castelli, Andrea Sala

First published: 25 January 2011 | https://doi.org/10.1007/s00268-011-0964-3 | Citations: 16

UNIVERSITY OF CALGARY

Surgical repair of femoral pseudoaneurysm (n=82, 51% urgent/emergent)

- 24% had major postoperative complication: post-op bleed (26%), wound infection (13%), cardiac (7%)
- All complications associated with higher probability of ICU stay and longer hospital stay

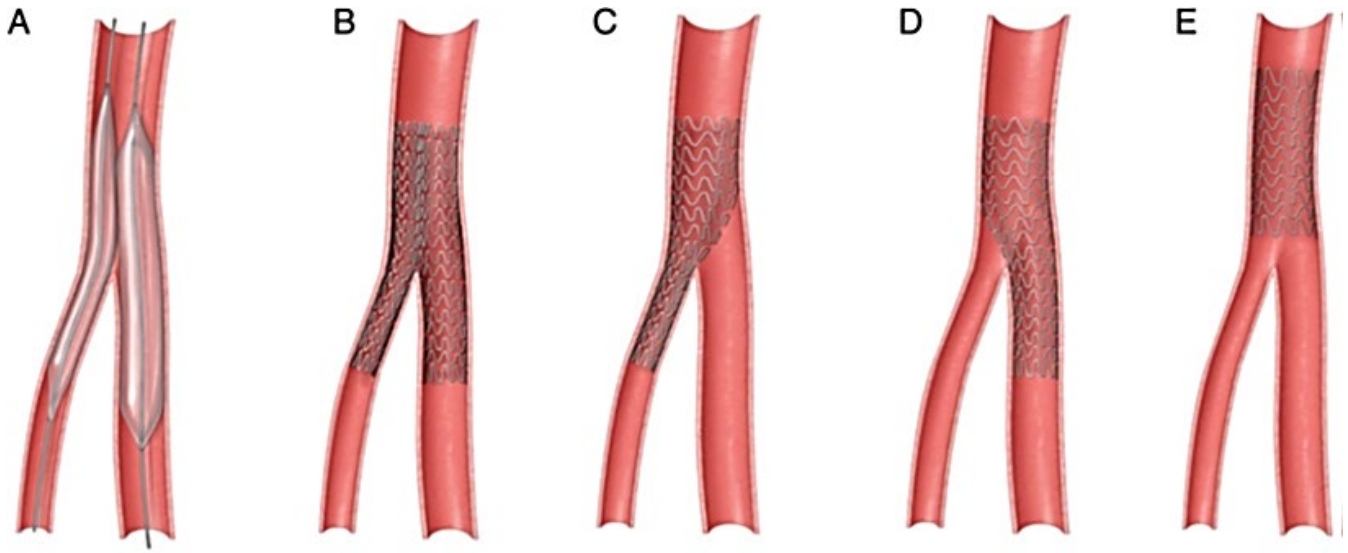
SUPERA Stenting in the Common Femoral Artery: Early Experience and Practical Considerations

M.J. Tao · A. Gotra · K.T. Tan · N. Eisenberg · G. Roche-Nagle · S. Mafeld

Vascular and Endovascular Surgery
2022, Vol. 56(4) 357–368

UNIVERSITY OF CALGARY

- *At 12 months, no stent fractures, 100% patency*



Stenting or Surgery for De Novo Common Femoral Artery Stenosis

Yann Gouëffic, MD, PhD,[a,b,c] Nellie Della Schiava, MD,[d] Fabien Thaveau, MD, PhD,[e] Eugenio Rosset, MD, PhD,[f] Jean-Pierre Favre, MD, PhD,[g] Lucie Salomon du Mont, MD,[h] Jean-Marc Alsac, MD, PhD,[i] Réda Hassen-Khodja, MD,[j] Thierry Reix, MD,[k] Eric Allaire, MD, PhD,[l] Eric Ducasse, MD, PhD,[m] Raphael Soler, MD,[n] Béatrice Guyomarc'h,[o] Bahaa Nasr, MD[p]

JACC: CARDIOVASCULAR INTERVENTIONS VOL. 10, NO. 13, 2017

UNIVERSITY OF CALGARY

TECCO Trial : Traitement des Lésions Athéromateuses de l'Artère Fémorale Commune par Technique Endovasculaire Versus Chirurgie Ouverte

- RCT: CFA endarterectomy (n=61) vs. CFA stent (n=56)
- Lower 30-day mortality, fewer systemic + local complications in stent group (odds ratio = 2.5, $p<0.05$)
- Shorter hospital stay in stent group (3.2 vs. 6.3 days; $p < 0.0001$)
- No difference in patency or ABI at 24-month follow-up

Endovascular management of femoral access-site and access-related vascular complications following percutaneous coronary interventions (PCI)

Nadjib Schahab, Refik Kavsur, Thorsten Mahn, Christian Schaefer, Alexander Kania, Rolf Fimmers, Georg Nickenig, Sebastian Zimmer

Published: March 19, 2020 • https://doi.org/10.1371/journal.pone.0230535

UNIVERSITY OF CALGARY

53 PCI-related femoral artery complications at Bonn University Hospital, Germany (2014-2018)

- n=40 stent graft repair, n=13 open surgical repair
- Stent graft: shorter LOS, less groin infection, lower lymph leak, less PRBC transfusion ($P < 0.05$ for all)
- 1-year follow-up: no claudication or secondary intervention required in stent group

Lessons:

- *Stent graft repair is a practical option for high-risk patients with common femoral artery trauma*
- *Stent repair of CFA has fewer early local and systemic complications, versus open surgical repair*
- *12–24-month durability is good when self-expanding stents are used*


Thank you!