

What Modifications Of The Distal Components Of F/EVAR Endografts Help To Avoid Branch Vessel Stent-Graft Compression: Indications And Results

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51st Veith Symposium
New York, 2024-11-20

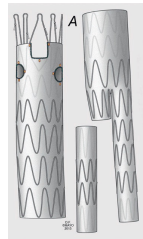


Disclosures / Conflict of Interest

- Proctor, IP, Research collaboration and/or Speaker:
 - Cook Medical
 - Angiodroid
 - Boston Scientific
 - Gore
 - Medtronic
 - Siemens Healthineers

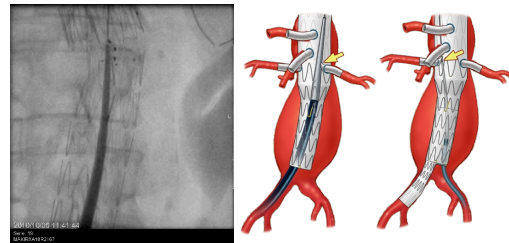
Why is bridging stent compression an issue?

- FEVAR Modular design



in Oderich et al. Springer 2017

Possible compression by distal devices

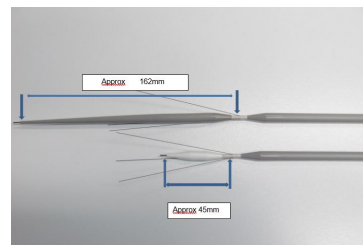


Karelis et al. EJVES 2024

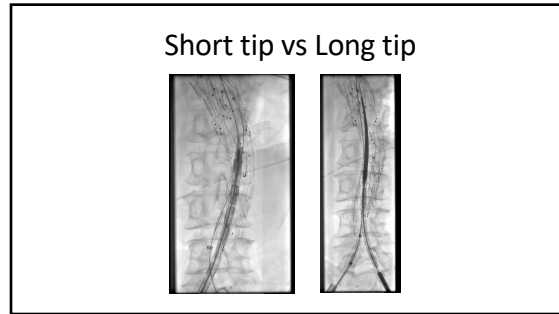
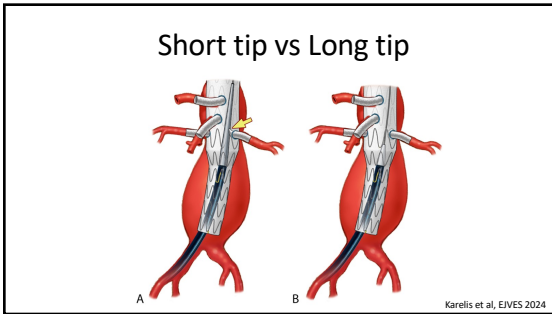
Possible solution

Shorten the tip of the distal delivery systems

1. Customize the tip of the distal bifurcated device



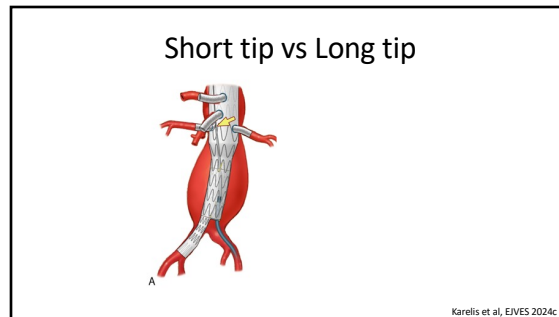
Karelis et al. Int Angin 2019



Possible solution

Shorten the tip of the distal delivery systems

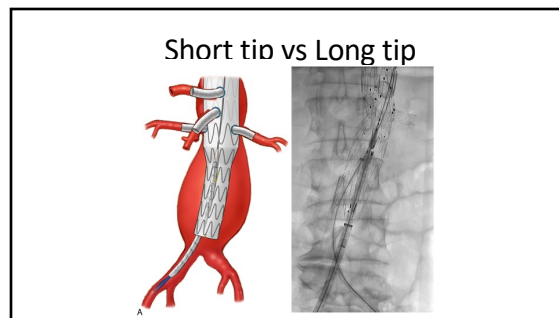
1. Customize the tip of the distal bifurcated device
2. Use contralateral iliac extensions with short tips



Possible solution

Shorten the tip of the distal delivery systems

1. Customize the tip of the distal bifurcated device
2. Use contralateral iliac extensions with short tips
3. Use distal commercial bifurcated devices with short tips



Possible solution

Shorten the tip of the distal delivery systems

1. Customize the tip of the distal bifurcated device
2. Use contralateral iliac extensions with short tips
3. Use distal commercial bifurcated devices with short tips

“No Cross” Concept

Results – No Cross

Fenestrated Endovascular Repair Using Short Tipped Distal Components with No Cross Concept to Prevent Crushing of Target Vessel Bridging Stents

Angelos Karelis^{1,2*}, Yair Mohammed^{3,4}, Gustavo S. Oderich⁵, Björn Sonesson^{6,7}, Nuno V. Dias^{8,9}

- CMD short tip + Short cotralateral Iliac limb vs Standard devices
 - 35 pts vs 35 pts
 - No Cross:
 - Higher technical success: 100 % vs 83%
 - Fewer Target Vessel adjunctive procedures 1.5% vs 8.2%
 - Follow-up: 32 (22-62) mo

Karelis et al, EJVES 2024

Results – No Cross

Journal of Endovascular Therapy
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DOI: 10.1177/1526282424125790
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Multicentric Use of Commercially Available Infrarenal Endografts During Fenestrated Endovascular Aortic Repair: A Feasibility Study

Angelos Karelis, PhD^{1,2*}, Magnus Jonsson, PhD³, Jacob Budtz-Lilly, PhD^{4,5}, Wendela Jirstrom, MD^{1,2}, Björn Sonesson, PhD^{6,7}, and Nuno V. Dias, Prof^{8,9}

- FEVAR + Gore Excluder
 - 23 pts
 - Median follow-up: 23 (17 -28) mo
 - No compression of bridging stents
 - No migrations / separations / type 3 endoleaks

Journal of Endovascular Therapy
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DOI: 10.1177/1526282424125790
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Karelis et al, JEVT 2024

Limitations – No Cross

- The Cook ZFEN CMD distal bifurcated endograft
 - Limited overlap zone
 - Often require inverted contralateral limbs and barbs
- The Gore Excluder Endograft
 - Ipsilateral Extension not always possible
 - Distal device diameter: 12 - 14.5 mm
 - Length is not customizable

Conclusions

- The distal bifurcated component of FEVAR can be modified to achieve a “No Cross” concept by:
 - Customizing a short tip of the bifurcated graft + contralateral Gore iliac limbs
 - Combine with Gore infra-renal bifurcated endografts distally
- Seems to avoid stent compression
 - Without compromising the outcome during follow-up

