New Findings From The PERICLES Registry Shed Light On Ways To Improve Outcomes Of Parallel Grafts To Treat Complex Aneurysms

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PERICLES Registry

What is new?

Disclosures

- Consultant: Getinge, Medtronic
- Research and presentation grant: Cook, Biotronik

PERICLES Registry

Gender outcomes in ch-EVAR
Torsello G et al, Vascular 2018

Novel classification of gutter-related endoleaks
Donas KP et al, JEVT 2017

Incidence and prognostic factors for cerebrovascular events
Bosiers MJ et al, JVS 2018

Treatment of type IA endoleaks after EVAR
Ronchey S et al, JEVT 2018

Identification of optimal devices combination
Scali S et al, JVS 2018

Classification of Chimney EVAR-Related Endoleaks: Insights From the PERICLES Registry

Pattern A
Excessive oversizing of the aortic endograft
Donas KP et al, JEVT 2017

Pattern B
Undersized aortic endograft in large neck diameters or multiple chimneys

Pattern C
Insufficient sealing length and migration
Gender outcomes in ch-EVAR
Torsello G et al, Vascular 2018

Novel classification of gutter-related endoleaks
Donas KP et al, JVET 2017

Identification of optimal devices combination
Scali S et al, JVS 2018

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Incidence and prognostic factors for cerebrovascular events
Bosiers MJ et al, JVS 2018

PERICLES Registry
Annals of Surgery 2015

Gender and perioperative outcomes after fenestrated endovascular repair using custom-made and off-the-shelf devices
David F. Theron, MD, Morye Kim, MD, Martin Seco-Gonzalez, MD; J. Gregory Modest, MD,1
Shirley You, MD, Helen Eskander, MD, John Reardon, MD, and Charles H. Theron, MD
Dallas, Tex, and Cape Girardeau, Mo

Background: The role of gender on perioperative outcomes after fenestrated endovascular aortic aneurysm repair (FEVAR) is not well studied. The aim of this study is to determine the effect of gender on perioperative outcomes after FEVAR for complex abdominal aortic aneurysms using fenestrated devices.

Methods: A retrospective review of 69 patients (37 men and 32 women) who underwent FEVAR using Zenith fenestrated endovascular aneurysm repair (Endovascular Technologies, Inc, and Medtronic, Minneapolis, Minn) and Medtronic Vanguard fenestrated endograft (Medtronic, Minneapolis, Minn) from February 2015 to July 2018. Demographic, procedural, and perioperative data were obtained from electronic medical records. In-hospital mortality, 30-day mortality, acute renal failure, late type 1 endoleak, and other complications were compared between men and women. Logistic regression was used to identify independent predictors for each outcome.

Results: There was no difference in acute renal failure, location, area, or number of fenestrations between patients in either group. Women were more likely to undergo concomitant AVR (6 of 32 women [18.7%] vs 0 of 37 men [0%]; P = .03). The overall perioperative complications rates were similar among women and men (28.1% vs 26.3%; P = .76). However, women experienced longer lengths of hospital stay (15.4 ± 9.0 days vs 9.8 ± 4.3 days; P = .003) and were more likely to require reintervention (4 of 32 women [12.5%] vs 2 of 37 men [5.4%]; P = .049).

Conclusions: FEVAR is a safe and effective procedure for patients at high and moderate risk for open repair who are not eligible for standard EVAR. Women are at risk for increased reintervention and longer duration of hospital stay and require more reinterventions than men who undergo FEVAR. This trend may be more pronounced in women who require concomitant AVR.

CHIMNEY EVAR OUTCOMES

<table>
<thead>
<tr>
<th>OUTCOME</th>
<th>FEMALE (N)</th>
<th>MALE (N)</th>
<th>P</th>
</tr>
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<tbody>
<tr>
<td>30-day mortality</td>
<td>0 (0)</td>
<td>5 (1.5)</td>
<td>0.59</td>
</tr>
<tr>
<td>Acute renal failure</td>
<td>2 (1.1)</td>
<td>13 (4.6)</td>
<td>1.00</td>
</tr>
<tr>
<td>Late Type 1 endoleak</td>
<td>3 (5)</td>
<td>22 (9)</td>
<td>0.28</td>
</tr>
</tbody>
</table>

FEMALE PATIENTS UNDERWENT PLACEMENT OF MORE FLEXIBLE CHIMNEY GRAFTS

NO STATISTICALLY SIGNIFICANT DIFFERENCES
**CHIMNEY GRAFTS-RELATED OUTCOMES**

<table>
<thead>
<tr>
<th>Chimney occlusion</th>
<th>5 (7)</th>
<th>40 (11.7)</th>
<th>0.33</th>
</tr>
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<tbody>
<tr>
<td>Reintervention</td>
<td>4 (6.2)</td>
<td>35 (10.7)</td>
<td>0.23</td>
</tr>
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**Conclusion**

Gender-related outcomes of chimney EVAR within the PERICLES registry

- Use of chimney EVAR for juxtarenal pathologies has benefits for women showing no statistical differences regarding mortality, renal failures, chimney graft patency and complication rates

**Synopsis**

- **New findings about ch-EVAR from PERICLES Registry cohort:**
  - Classification of gutter-related endoleaks
  - Low incidence of clinical-driven cerebrovascular events
  - Bilateral access as in multiple chimneys high risk of increased MACE rate
  - Successful use in excessive type IA endoleaks after EVAR and female patients