EnChEVAR is a safe and effective procedure if you do it right

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Disclosure

Speaker name:
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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
EnChEVAR is a safe and effective procedure if you plan and size right.

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ChEVAR

Use of off-the-shelf devices
Chimney EVAR Endoleaks

**Pattern A**
Excessive oversizing of the aortic endograft

**Pattern B**
Undersizing of the aortic endograft in large neck diameters

**Pattern C**
Insufficient sealing length and migration

Donas KP, Criado FJ, Lachat M, Torsello G, Minion D. Insights from PERICLES Registry. JEVT 2017
3.0-fold increased risk of developing intraoperative type 1 endoleak with stainless steel + BECS devices compared to nitinol endoskeleton + BECS (HR 3.0, 1.3-6.9; p=.01).

Scali S, Lee JT, Lachat M, Torsello G, Veith FJ, Donas KP. Observations from PERICLES Registry
Multicentre Experience with the Chimney Technique for Abdominal Aortic Aneurysms in French University Hospitals

Joseph Touma, Caroline Caradu, Raphaëlle Sylvestre, Nicla Settembre, Fabrice Schneider, Alessia Moia, Sabrina Ben Ahmed, Benoit Lebas, Julien Gaudric, Jean-Marc Alsac, Edouard Warein, Raphaël Coscas, for the Association Universitaire pour la Recherche en Chirurgie (AURC) Collaborators

*Department of Vascular Surgery, Henri Mondor University Hospital, AP-HP, Créteil, France

<table>
<thead>
<tr>
<th>Characteristics of ChEVAR</th>
<th>ChEVAR procedures (n = 201)</th>
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<tbody>
<tr>
<td><strong>Implanted stent grafts</strong></td>
<td></td>
</tr>
<tr>
<td>Zenith (Cook)</td>
<td>113 (56.2)</td>
</tr>
<tr>
<td>Endurant (Medtronic)</td>
<td>39 (19.4)</td>
</tr>
<tr>
<td>C3 (Gore)</td>
<td>35 (17.4)</td>
</tr>
<tr>
<td>AFX (Endologix)</td>
<td>5 (2.5)</td>
</tr>
<tr>
<td>Others</td>
<td>9 (4.5)</td>
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<tr>
<th>Type of chimney stent</th>
<th></th>
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<tbody>
<tr>
<td>Covered stents</td>
<td>234/343 (68.2)</td>
</tr>
<tr>
<td>Bare metal stents</td>
<td>109/343 (31.8)</td>
</tr>
</tbody>
</table>
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**Conclusion:** In this large national CheVAR series, early results were concerning. The reasons may lie in heterogeneous practices between centres and CheVAR use outside of current recommendations regarding oversizing rates, endograft types, and sealing zones. Future research should focus on improvements in pre-operative planning and intra-operative technical aspects.
The PROTAGORAS study to evaluate the performance of the Endurant stent graft for patients with pararenal pathologic processes treated by the chimney/snorkel endovascular technique

Konstantinos P. Donas, MD, a,b Giovanni B. Torsello, MD, a,b Gianluca Piccoli, MD, c Georgios A. Pitoulias, MD, a,b,d Giovanni Federico Torsello, MD, c Theodosios Biswas, MD, a,b Martin Austermann, MD, a,b and Daniele Gasparini, MD, c Münster, Germany; Udine, Italy; and Thessaloniki, Greece

Results: A total of 187 snorkel/chimney grafts were successfully placed in 128 patients (mean age, 76.6 years). The technical success was 100%. The mean preoperative proximal neck length and aneurysm size were 4.7 mm and 64.8 mm (range, 48-135 mm), respectively. The postoperative new neck length after use of chimney grafts was 18.7 ± 6.3 mm. The mean aneurysm sac decreased significantly (60.8 mm; 95% confidence interval, 2.036-7.084; P = .001) after a mean radiologic follow up of 24.6 ± 17.4 months. Thirty-day mortality and midterm mortality were 0.8% and 17.2%, respectively. Two patients (1.6%) with single chimneys presented with late new onset of type Ia endoleak and underwent additional tube and multiple chimney placement. Primary chimney graft patency was 95.7%. Freedom from chimney graft-related reinterventions was 93.1%.
En-ChEVAR

1. Patient selection
2. Case planning
En-ChEVAR

- Absence of relevant infra-suprarenal angulation
- Diameter of the renal arteries of at least 6mm without stenosis or angulation
- Distance of the lower right RA and left upper RA >10mm
- Orientation of the renal arteries: Downwards
- CTA of thoracic aorta? Left subclavian artery patent? Thrombus?
New hybrid OR in Langen

Advanced radiological imaging- IVUS
Set up
Standardization in materials selection
Dedicated nurse team and continuous team education with hands-on models, workshops
Dedicated nurse team and continuous team education with hands-on models, workshops
Following those recommendations, **En-ChEVAR** is a reliable treatment also in newly founded vascular centers as at the Asklepios Clinic Langen, Germany.
1st En-ChEVAR in Europe