ROSEMONT, Illinois, April 24, 2019 – Results from a large, single-center data review in France provide critical information regarding patient selection and expected outcomes in the most difficult of endovascular aortic aneurysm repairs.

Paravisceral and thoracoabdominal aneurysms are the most challenging cases for vascular surgeons. The combination of patient co-morbidity and complex paravisceral aortic anatomy mandates utmost surgical judgment, technical skill and a multi-disciplinary approach to achieve acceptable outcomes. While open surgical repair has been the standard of
Previous research suggests advanced age, history of congestive heart failure, aneurysm diameter and chronic renal insufficiency are the most important risk factors determining the outcomes for infrarenal endovascular aneurysm repair. Limited data exists with regards to more complex proximal repairs given the few reports for fenestrated and branched endovascular aneurysm repair (F-BEVAR).

As reported in the May edition of the Journal of Vascular Surgery, researchers from Lille, France led by Dr. Stephan Haulon, reviewed their prospectively collected single-center data involving 468 high-risk patients with pararenal or thoracoabdominal aneurysms treated with F-BEVAR from 2004-2016.

The clinical and anatomic characteristics of the cohort included:

- Age - 72 (65-77) years
- Male sex - 94%
- ASA class 3 or 4 - 95%
- Diameter - 58 (54-64) mm
- Type 1-3 - TAAA 47%
- Type 4-5 - TAAA 53%

The technical success for target vessel stenting was 99%.

Their early results included:

- 30-day mortality -- 5%
- Spinal cord ischemia - 4%
- Post-operative dialysis - 4% (0.8% long-term)

The median follow-up was 29 months with a 5-year survival rate of 60%. Freedom from vessel occlusion and secondary procedures were 90% and 70% at five years, respectively.

Early mortality was associated with procedure time, aneurysm diameter and chronic renal insufficiency. Mortality during the first 24 months was also associated with more extensive, Type 1-3 TAAAs.

“Our findings suggest that F-BEVAR can be performed in high-risk patients with excellent technical success, low 30-day mortality rate, and low rates of spinal cord ischemia and permanent dialysis,” noted Dr. Haulon. “Additionally, our 5-year survival rate of 58% is similar to other series, with the majority of deaths attributed to non-device and non-aorta-related causes.”

“The strength of this study lies in the large cohort of prospectively collected patient data, extensive follow-up and systematic approach to preoperative planning, execution, and surveillance,” Dr. Haulon noted. “Because the study covers a 12-year experience, there has been a transformation in practice and techniques over time.”

“We believe these procedures can be offered safely, even in high-risk patients; however, this mandates that high-volume centers be prepared to invest in the incrementally complex learning curve that this technology and these patients demand,” Dr. Haulon said.

The journal article is open source through June 30 at vsweb.org/JVS-Complex.