Retroperitoneal Approach for Complex AAAs Unsuitable for EVAR, FEVAR or CHEVAR: Tips and Tricks

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Disclosure
Nothing to disclose, Except Albany still does a reasonable amount of open Aortic Reconstructions

Why Do I Need To Know Open Aortic Surgery

Up to 20% AAA Anatomically unsuitable for EVAR
Endovascular/Stent Failures (Ruptures, Infections Leaks)
Visceral Reconstructions

Endo Only Approach? Probably, Not Yet

Indications for Open Aortic Reconstruction

No Safe-Para Renal/Visceral Aortic Landing Zone
Thrombus or Significant Atherosclerotic Disease
Renal/Visceral Artery Disease
Poor Access

The Approach to EVAR and Open AAA Repair is Similar-Technique

Manipulation of Device or Movement of Clamp Can Cause Problems
Protect Renals by Avoiding Poor Deployment or Plaque Shift
If No Urine Consider Intervention
Exposure of Subdiaphragmatic Aorta
Exposure of Visceral Vessels
Methods to Minimizing Visceral Ischemia

ANATOMY

ANATOMIC BENEFITS OF RETROPERITONEAL AORTIC EXPOSURE

- Excellent access to the subdiaphragmatic aorta
- Permits clamping above one or both renal arteries
- With division of the left crus, allows supraceliac cross-clamping

Principals Of Aortic Surgery

In Reconstructing the Aorta and Its Branches:
- Minimize End-Organ Ischemia
- Minimize Cardiac Work
- Minimize Trauma/Blood Loss/Fluid Shifts
- Have a Plan with Options/No Wasted Effort

Make Every Operation A Useful Teaching(and Learning) Experience

Pre Op Technical Preparation
Group Discussion of Technical Options
"In Vivo Simulation" Simulate a Rupture AAA Experience in every procedure
Teach Inclusively
Planning Concepts Of Open and Endo AAA Repair are Identical

The Approach to EVAR and Open AAA Repair is Similar-The Plan

CTA:
Understand The Anatomy
Landing Zone = Clamp Placement
Don't Clamp in Thrombus & Avoid Calcium
Clamp Once On Safest Spot
Evaluate Landing/Clamping Zone

Technique for Left Posterolateral Retroperitoneal Aortic Exposure

- RIGHT LATERAL DECUBITUS
- INCISION THROUGH 10TH INTERSPACE
- LATERAL ENTRANCE TO THE RETROPERITONEUM
- LIGATION OF THE LUMBAR BRANCH OF THE LEFT RENAL VEIN
- ELEVATION OF THE LEFT KIDNEY
- DIVISION OF THE CRUS OF THE DIAPHRAGM (if needed)
The Retroperitoneal Approach is a versatile and safe exposure for aortic reconstructions. It may offer physiologic and anatomic benefits for patients with aorto-iliac disease. The Retroperitoneal Approach may especially benefit patients with complex aortic neck pathology.

Are We Expanding the Indication for EVAR Too Quickly?

Contemporary Reviews
Two Decades of Endovascular Abdominal Aortic Aneurysm Repair: Enormous Progress With Serious Lessons Learned
Andres Schanzer, MD;
Louis Messina, MD;
J Am Heart Assoc. 2012;1:e000075; originally published June 21, 2012

Embrace Change, But Do It Based On Data
OPEN AORTIC VOLUME FOR FELLOWS

2001 to 2011
Open AAA
25.9 cases to 11.8
Suprarenal AAA
3 cases to 3.1
EVAR
16.9 cases to 44.