HOW TO TREAT BY EVAR COMPLEX AORTO-ILIAC AAAs IN PATIENTS WITH RENAL TRANSPLANTS, HORSESHOE OR PELVIC KIDNEYS

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DISCLOSURES
• Off label use of approved commercial devices

Background
Renal Artery Anomalies
• >40% of patients with multiple renal arteries
• Renal Ectopia and Fusion
  • “Horseshoe Kidney” and “Pelvic Kidney”
  • Combined incidence <1%
• Renal Transplant
  • Transplant + AAA = 1% incidence
  • “Acquired” anatomy
• All involve a renal artery origin near aortic bifurcation or common / external / internal iliac artery

PERSONAL CLINICAL SERIES: ATYPICAL KIDNEY + AORTO-ILIAC ANEURYSMS

18 patients
9 Renal Transplant
6 Congenital Pelvic Kidney
3 Horseshoe Kidney

10/18 patients survived in cohort → no aortic related mortality
All renal reconstructions patent at last f/u
1 patient deterioration renal function due to obstructive uropathy
No aneurysm ruptures, aortic re-interventions or open conversions

RECONSTRUCTION PRIORITIES
• Maintain antegrade renal artery flow to atypical kidneys = accept 1/4 - 1/3 renal parenchymal loss for multiple renals
• To achieve endograft fixation lengths > 2 cm aorta + iliacs for aneurysm exclusions

OUTCOMES
• 10/18 patients survived in cohort → no aortic related mortality
• All renal reconstructions patent at last f/u
• 1 patient deterioration renal function due to obstructive uropathy
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## ATYPICAL RENAL OFF AORTA

### TREATMENT OPTIONS

- **COVER + EVAR** for smaller accessory / multiple renals.
- **OPEN HYBRID** open transposition to distal iliac + EVAR.
- **OPEN** aorto-ilio-fem bypass + bypass / reimplant.

## ATYPICAL RENAL OFF ILIAC

### TREATMENT OPTIONS

- **EVAR** (aorto-biiliac) (aorto-aortic)
  - If off EIA or IIA + CIA landing zone.
  - If off CIA + distal aortic landing zone.
- **ENDO HYBRID**
  - If CIA / IIA aneurysm unilateral / bilateral.
  - If iliofem PAD / occlusions (trans CCA access).
- **OPEN HYBRID**
  - If no AUI options + can transpose renal to EIA.
- **OPEN**
  - If no hybrid or EVAR options.

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Creative solutions with AUI's.