How Best To Treat Inflammatory AAAs: When Is EVAR Best And When Is It Not

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NO CONFLICT OF INTEREST

INFLAMMATORY AAA
(1972 Walker)

2.0-18.1% OF ALL AAAs

- MALE: FEMALE 9:30:1
- THICKENED AORTIC WALL/PERIANEURYSMAL FIBROSIS (=plasma cells, lymph., macroph.)
- FIBROSIS INVOLVES
  - DUODENUM 100%
  - IVC 70%
  - LRV 50%
  - URETER 44% (20% HYDRONEPHROSIS)
  - SIGMOID COLON 20%

OPEN SURGERY

CONS
• higher mortality (s-AAA x 3) and morbidity
• the planes of surgical dissection are obscured by fibrotic adhesions
• Risk of iatrogenic injury
  – Duodenum (avoid dissection)
  – Left renal vein
  – Ureter (hydronephrosis)
  – Inferior vena cava
  – Sigmoid colon

Some Authors propose supraceliac clamping

A surgical case of inflammatory abdominal aortic aneurysm that responded remarkably to preoperative steroid therapy

- Prednisolone was 30mg/day (0.5 mg/kg/day)
- Gradually reduced to 10mg/day
- Reduces inflammatory signs
- Reduces size of retroperitoneal mass

Preoperative steroid therapy could minimize the operative risk for I-AAAs, and improve surgical outcome

Journal of Surgical Case Reports, 2018;2, 1–3
A Systematic Review of Open Versus Endovascular Repair of Inflammatory Abdominal Aortic Aneurysms

S.C.V. Paravastu1, J. Ghosh, D. Murray, F.G. Farquharson, F. Serracino-Inglott, M.G. Walker

30 day MORTALITY
OR vs EVAR
6.2 vs 2.4%

EVAR + SYSTEMIC STEROIDS ADMINISTRATION
METHYL PREDNISOLONE → 4 MTHS
- 40 MG EV X 2 DAYS
- 32 MG DAILY 2 WEEKS
- 24 MG DAILY 2 WEEKS
- 16 MG DAILY 2 WEEKS
- 12 MG DAILY 2 WEEKS
- 8 MG DAILY 2 MONTHS

Clinical Outcomes After Endovascular Repair and Open Surgery to Treat Immunoglobulin G4-Related and Nonrelated Inflammatory Abdominal Aortic Aneurysms

Satomi Kasahima, MD, PhD1,2, Fusunori Kasahima, MD, PhD1, Atsuki Kawashima, MD, PhD1, Masamitsu Endo, MD, PhD1, Yasushi Matsumoto, MD, PhD1, and Kengo Kawakami, MD, PhD1

this pilot study suggested that EVAR treated IgG4+ AAAA patients have a higher risk of persistent symptoms and increases in PAF, sac diameter, and IgG4 levels. Therefore, OS should be preferred for complete recovery.
M 76 YRS, SMOKER, HYPERTENSION, DYSLIP, ASYMPT

AFTER 4 DAYS CORTICOSTEROIDS THP
- 28% PAF THICKNESS
- 24% PAF AREA

<table>
<thead>
<tr>
<th>SUV max</th>
<th>SUV mean</th>
<th>TBR</th>
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<td>21 6,71</td>
<td>2,40</td>
<td>2,58</td>
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MATERIALS AND METHODS

ALL IAAA PATIENTS UNDERWENT STANDARD WHOLE BODY 18F-FDG PET/CT
BEFORE EVAR (AFTER IN EMERGENCY), AT 4, 12, 24 MTHS

IMAGING ANALYSIS:
- SUV MAX: A VOI ON THE AREA OF MOST INTENSE 18F-FDG UPTAKE OF THE AORTIC WALL
- TBR: SUV MAX / 1CM³ VOI ON THE SUPERIOR VENA CAVA

TBR: TARGET TO BACKGROUND RATIO
SUV: STANDARDIZED UPTAKE VALUE - VOI: VOLUME OF INTEREST

30 DAYS RESULTS

1 PT INITIALLY CONSIDERED FOR OR → DOUBLE J-STENT*
UNEVENTFULL
30 DAYS MORTALITY → 0%
ALL SYMPTOMATIC BECAME ASYMPTOMATIC WITHIN 12HRS**
MORTALITY 1/10 UROSEPSYS (3 MTHS)*
M 76 YRS, SMOKER, HYPERTENSION, LOWER BACK PAIN

- CRP: 2.48 MG/DL
- CT: AAA WITH PERIAORTIC HYPODENSE TISSUE

SUV MAX: 9.59 TBR: 5.3

4 MTHS CT
- CRP: 1.85 MG/DL
- CT: SLIGHT REDUCTION OF DIAMETER AND THICKNESS

CRP: 2.36 MG/DL (V. N. 0-0.80 MG/DL)
- CT: AAA WITH PERIAORTIC HYPODENSE TISSUE

SUV MAX: 2.58 TBR: 1.25

AFTER CORTICOSTEROID PROTOCOL
- ALL PTS WERE ASYMPTOMATIC

RESULTS @ 29 MTHS (1-57)

- PT1 THERAPEUTIC CYCLE AFTER SLIGHT UPTAKE +12 MM
- PT3 RECURRENCE – NO COMPLIANCE FOR CORTICOSTEROID THP
- PT9 LOST AT FOLLOW UP

CONCLUSIONS

- EVAR ASSOCIATED TO STEROID THERAPY IS OUR FIRST LINE STRATEGY FOR FIT I-AAA
- STEROID THERAPY IS EFFECTIVE IN REDUCING/ABOLISHING RETROPERITONEAL FIBROSIS (PET-CT)
- OPEN SURGERY IS THE BEST CHOICE IN PATIENTS UNFIT FOR STANDARD EVAR
- ASSOCIATED PREOPERATIVE STEROID THERAPY CAN BE CONSIDERED EVEN FOR OS