Open Repair For Visceral Segment TAAAs After TEVAR:
The Reverse Cactus Operation:
A Good Option When Endo Treatment Is Not Possible:
Technique And 1-Year Results

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Residual TBAD in pts previously treated by TEVAR
FROZEN ELEPH. TRUNK

NEW KIND OF PATIENTS NEEDING APPROPRIATE TREATMENT

Contraindications to further EV repair
1. Associate Visceral Arterial Dissection or Occlusion
2. Collapsed True lumen
3. Connective Disorders
4. Young Age
5. Excessive Tortuosity
6. Multiple Renal Arteries

The “Reverse Cactus”
Dacron Tube or Bifurcated Graft on which Sides
Two Additional Smaller Bifurcated Dacron Grafts Have Been Implanted In Order To Have Four Additional Side Branches

The “Reverse Cactus”
The “Reverse Cactus Operation”

CSF Drainage and MEP/SSEP
Left Thoracophreno-laparotomy on the 7th- 8th Intercostal Space and Retroperitoneal Abdominal Aortic Approach
Left Atrio-Femoral Centrifuge Pump Bypass
Double Clamp of Proximal Aorta Within the Endograft and make the proximal Anastomosis with the Graft
Prepare the CT, SMA and LRA at origin, outside the sac
Ligature and section of the Coeliac Trunk at its Origin and Anastomosis with one Side-Branch of the Graft
Do the same with the SMA and the LRA, Before Opening the sac, that is perfused via Femoral
Open the Aorta, connect the Intercostals and the RRA, and make the distal anastomosis

The “Reverse Cactus Operation”

Exposure of Celiac Trunk and Proximal Ligation
If The Vessel Is Dissected, Identify The True Lumen By Alternative Clipping The Flap To Either Side Of Artery

The “Reverse Cactus Operation”

Do The Same With All Visceral Branches, Sequentially

The “Reverse Cactus Operation”

Open Aneurysm and Inner Sac Perfuse and Connect Intercostals
Technical success was obtained in all cases.

No 30-day mortality, reintervention or acute renal failure.

The average operative time was 482 minutes (range 415-690), with an estimated intra-operative blood loss of 1865 mL (range 904-4834).

Mean ICU stay was 4.2 days (range 2-11).

Reintervention and mortality rate were null.

No patients developed late-onset renal failure.

All visceral branch vessels were patent.

Two intercostal arteries were lost.
Conclusions

Residual TBAD: a challenging disease
The Reverse Cactus Operation: no need for rush...
Fits all anatomies
Fixes associated visceral arterial disease
Contains blood loss
Great hemodynamic and metabolic stability
Satisfactory 1-year results