Technical considerations for EVAR of Type B aortic dissections

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Disclosure

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I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest
A. ENDOVASCULAR FENESTRATION AND STENTING

B. STENT GRAFT THERAPY
A. ENDOVASCULAR FENESTRATION AND STENTING

A guidewire is advanced through a puncture of the flap and then dilated with a balloon.

DiMusto et al. J Vasc Surg 2010
A. ENDOVASCULAR FENESTRATION AND STENTING

self-expanding stent deployed in the TL

branch vessel stenting for static obstruction
A. ENDOVASCULAR FENESTRATION AND STENTING

DISCUSSION

- lower morbidity and mortality than surgery
- can relieve malperfusion both in TAD and TBD (also after open repair)
- high anatomical applicability

- limited to treat malperfusion
- long and complex procedure
- promotes blood flow in the FL

DiMusto et al. J Vasc Surg 2010
B. STENT-GRAFT OCCLUSION OF THE ENTRY SITE

Emergent treatment for aortic rupture

GORE C-TAG 28-15 + 31-10 + Amplatzer vascular plug

B. STENT-GRAFT OCCLUSION OF THE ENTRY SITE

Expansion of TL & thrombosis of FL

Swee et al. Circulation 2008
DiMusto et al. J Vasc Surg 2010
B. STENT-GRAFT OCCLUSION OF THE ENTRY SITE

Relief of dynamic obstruction of distal branch vessels
extends the stent-graft scaffold distally with open-cell bare-metal stents

Nienaber et al. J Endovasc Ther 2006
PETTICOAT
Provisional ExTension To Induce COmplete Attachment
Modified PETTICOAT
( pre-placement of the distal bare stent )

prevents distal mismatch between the distal stent-graft and the collapsed TL

He et al. EJVES 2015
proximal descending aortic endografting + distal bare-metal stenting + balloon expansion within the distal third of the endograft

The Candy Plug for Chronic TBD

Kolbel et al. J Endovasc Ther 2013
B. STENT-GRAFT THERAPY

DISCUSSION

- lower morbidity and mortality than surgery
- broad clinical indications
- simple and fast procedure

- narrow anatomical applicability

DiMusto et al. J Vasc Surg 2010
ANATOMICAL ISSUES AND COMPLICATIONS

- Severe angulation and tortuosity
- Variable extension of the proximal entry tear
- Fragile aorta with thrombogenic lesions
- Compliance mismatch b/w aortic wall-endograft

SG migration and incorrect deployment
Retrograde dissection
Stroke
Aortic iatrogenic rupture
Distal TL collapse

Chen et al. J Am Heart Assoc. 2017
Marrocco-Trischitta et al. EJVES 2018 in press
ANATOMICAL RISK FACTORS

High prevalence of Type III arch in TBD patients

>2 diameter of CCA

severe angulation and tortuosity

high pulsatile forces

Marrocco-Trischitta et al. ESVS 2017 Annual Meeting, personal communication
Marrocco-Trischitta et al. J Vasc Surg 2017
Marrocco-Trischitta et al. EJVES 2018 in press
TEVAR for uncomplicated Type B aortic dissection

a tailored issue
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