TEVAR for ALL: what could possibly go wrong…?

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DISCLOSURE
Medtronic: consulting, speaking/training

TEVAR is now an approved on-label indication for “treatment of type B aortic dissection”

Acute
Subacute
Chronic
Complicated
Uncomplicated

1 Complicated type B (30%): TEVAR imperatives
- Rupture
- Malperfusion
- Acute diameter expansion
- Persistent severe pain
- Uncontrollable hypertension

2 Uncomplicated type B (70%): selective TEVAR indications?
- Low-risk uTBAD
- High-risk uTBAD

High-risk uTBAD
DEFINITION:
- Collapsed TL
- FL diameter >22mm
- Large-size entry tear >10mm
- Entry tear along lesser curve
- Partially thrombosed FL (?)
Low-risk uTBAD

41y man
Severe hypertension
Acute aortic syndrome
Symptoms resolve in a few hours under optimal medical treatment

TBAD: New Information 1

- Acute (0-14 days), Subacute (15-90 days), chronic
- Aortic plasticity (capacity to remodel) lasts 90 days
- TEVAR safety (30d mortality, serious complications) is greatly enhanced when done during the subacute period - avoid intervention in first 2 weeks if possible (stable patients)

TBAD: New Information 2

- Medical Rx alone has poor long-term prognosis, and TEVAR repair prevents aorta-related death
- Acute uTBAD may become complicated within 14 days in 10% of patients
- Medical Rx is safe for patients with stable and non-progressive acute uTBAD
- Early TEVAR (first 14 days) is associated with increased risk of rTAD and other problems

Acute TBAD: Current Strategies

- Optimal medical Rx to all: control BP, anti-impulse, alleviate pain
- CTA on days 1-3-7
- Acute TEVAR for unstable patients: rupture, malperfusion
- Discharge to home after 8-10 days if doing well
- Return in 4 weeks for CTA and re-assessment

Acute TBAD: Current Strategies

- Plan default TEVAR in 6-12 weeks (20cm+ endograft aortic coverage)
- New treatment philosophy: “tell me why I should not do TEVAR intervention…”
  (old philosophy was: “give me one good reason why I should intervene…”)

Reasons not to do TEVAR on a stable asymptomatic patient with uTBAD:
- Arch involvement, inadequate zone 2 for proximal endograft landing
- Endovascular access issues
- Limited life expectancy, poor general health, serious medical co-morbidities, etc.
**BUT… on the downside, there is reason for continuing doubts:**

- Nearly 70% of medically treated patients are still alive 5 years later
- While evidence in favor of more aggressive Rx mounts, there is no level-1 evidence
- Device shortcomings as we are still using technologies designed for Rx of aneurysms

**AND…**

- Risks of rTAD and other potential serious complications
- Not every TEVAR operator is a world-class expert!

“There is no such thing as an uncomplicated type B dissection…”