Hybrid procedure for Complicated Acute Aortic Dissection type B in a young patient

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Disclosure

Speaker name:
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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
Type B aortic dissection: is result of a tear in the intimal arterial layer, creates a flap, which divides the aorta into a true lumen (TL) and a false lumen (FL).

Timing:
+ Acute: < 14 days.
+ Sub acute: 15-90 days.
+ Chronic: > 90 days.
Complication in ATBAD:
- Refractory hypertension or pain.
- Hemodynamic instability.
- Mal-perfusion syndromes
  + Dynamic obstruction.
  + Static obstruction.
- Aortic rupture
- Hypotension and shock.

Williams et al. Radiology. 1997;203:37-44
Background

TEVAR for ATBAD:
- Seal the proximal primary entry tear.
- Promoting false lumen (FL) thrombosis.
- Management Mal-perfusion.
- Prevent aneurysmal degeneration, rupture or death.
Medical report - 1st Patient

- **Gender**: Male.
- **Age**: 33 y.o
- **History**:
  + Hypertension (3 years not controlled).
  + Dyslipidemia
  + Alcohol abuse and tobacos use.
  + No DM. No family history.
- **Complain with**: Dyspnea and acute chest pain.
- **Clinical sign**: Femoral A. : weak pulse.
- **Urea /Creatinin**: 11.2/216
Medical report - 1st Patient

- MsCT 64s:
Hybrid Room from Viet Duc Hospital
- **General Anesthesia.**
- **Step 1**\(^{st}\): Right-Left Carotid A. Bypass.
- **Step 2**\(^{nd}\): Exposure both side Femoral A. \(\rightarrow\) Sheath 12F.
+ Percutaneous Radial access \(\rightarrow\) Sheath 5F.
Step 3:
+ Pigtail + Terumo wire through Left Femoral A. to True Lumen (TL)
- **Step 4th:**
  + Another Pigtail + Terumo through R-Radial A. to aAo to check angiography.
  + Change Stiff wire (Lunderquis-Cook) and advance the device (Valiant Thoracic) 30*30*200 and 30*26*150 – local above Celiac A.
- **Step 5th**: Check Angiography again: No Endoleak, no re-flow, Celiac + SMA’s flow good, Left Renal A.’s flow increase better but........
Step 6th: And the answer is ........ Classical technique:

→ “Percutaneous Fenestration”

William and al, 2009
Step 6th: And the answer is ……. Classical technique: “Percutaneous Fenestration”
- **Step 7**: Check angio ➔ better result: Blood flow through “new fenestration” supplies to Right Renal A.
- Transfer Patient to ICU Dept.
- Remove Endotracheal tube after 6h without paraplegia, stroke.
- After 1 week, we check MS CT 64s:
- Result of MS CT 64s after 1 year:
II. Conclusion:

- ATBAD can occur in every ages and is challenge.
- Endovascular treatment for complicated aortic dissection and mal-perfusion syndrome was a safe procedure with good mid-term clinical outcomes.
- More clinical data and long term follow up are needed.
Thanks you!
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