Tailoring the treatment of fragile aorta with the Valiant Navion Coveredseal device: my clinical experience in TBAD

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Disclosure

Speaker name: Theodoros Kratimenos

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
Overall, 27 European centers and 1 Chinese center participated in the registry. During the period from 1995 to 2008, a total of 4750 TEVAR procedures were performed in these 28 centers.

**Conclusions**— The incidence of rAAD was low (1.33%) in the present analysis with high mortality (42%). Patients undergoing TEVAR for type B dissection appeared to be most prone for the occurrence of rAAD. Importantly, the majority of rAAD cases were associated with the use of proximal bare spring stent grafts with direct evidence of stent graft–induced injury (semirigid device design) at surgery or necropsy in half of the patients.
CoveredSeal Valiant Navion - Type B Aortic Dissection (Fragile Aortic Wall Pathology)

“Soft touch” for decreased vessel trauma

- CoveredSeal’s proximal stent is fully enclosed within the graft
- Tip capture mechanism, holds on to internal seal stent
- Lower radial pressure
- Greater tapering of 5 and 6 mm
- "W" stent allows for graft material support between internal stents to enhance apposition and seal
  - Infolding resistance
Clinical Case: **Acute type b Aortic Dissection**

51 y/o male, type b dissection 5 days ago, Uncontrollable hypertension and unrelenting pain despite optimal medical therapy

Coveredseal NAVION
VNMC3428C207TE (prox)
VNMC3131C182TE (distal)
Clinical Case: **Acute type b Aortic Dissection**

- **30 DAYS post TEVAR f-up CT**
- TL: expanded,
- FL: totally thrombosed,
- Satisfying descending Thor. Ao remodelling
Clinical Case: **Subacute type b dissection**

47 y/o Male, Hypertension, Type B Dissection 2 weeks ago

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**14 days Follow-up CTA reveals:**

- FL and Descending thoracic aorta enlargement
- TL is compressed,
- covering LSA >> 25mm prox landing zone length

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<th>Product Code</th>
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<tr>
<td>VNMC3434C182TE</td>
<td>PROX</td>
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<td>VNMC3731C207TE</td>
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S/G Advancement and Positioning keeping the delivery system against the outer aortic curve
Clinical Case: **Subacute type b dissection**

- Graft deployment keeping the delivery system against the outer aortic curve
- Delivery system relaxation Tip-capture release
- Precise prox S/G deployment
- Accurate distal S/G deployment
Clinical Case: **Subacute type b dissection**

1 Year Post TEVAR Follow-up CT

- TL: completely expanded,
- FL: almost no evidence,
- Excellent descending Thor. Ao remodelling
CLINICAL CASE: CHRONIC TYPE B DISSECTION

- FEMALE 50 years old,
- Type A dissection 6 months ago, surgically treated, residual TBAD
- F-up CTA reveals: FL and descending Thoracic aorta enlargement, compressed TL

Coveredseal Navion
CLINICAL CASE: CHRONIC TYPE B DISSECTION

Type III aortic arch

Precise and accurate deployment despite aortic arch angulation

No bird beak fenomeno

6 months post TEVAR f-up CT
Elective 2nd stage TEVAR to complete Frozen Elephant Trunk

- FET technique may fail to achieve false lumen obliteration at the descending thoracic aorta level in 8–15% of patients
  

**Clinical case: TEVAR post FET.**

Male 48 y/o, history of FET for type A dissection 6 months ago, now presents with:

1. TL compression distally of the surgical graft,

2. FL patency and

3. descending thoracic aorta diameter enlargement

Coveredseal Navion VNMC3737C223TE
Clinical case: Elective 2nd stage TEVAR to complete Frozen Elephant Trunk

Pre TEVAR ANGIO  
Stent-Graft Positioning  
Post S/G Deployment Angio

1 Year Post FET AND  
6 Months Post-TEVAR CT scan
Take home messages and learnings

✓ Since Nov. 2018 more than 20 pts have been treated in our department for TBAD with Navion Coveredseal

✓ The features of the Valiant Navion Coveredseal system make it a suitable choice for the treatment of fragile aortas, minimizing disruption to the native vessel.

✓ A Post Market Registry (DISSECT-N TRIAL) started to better understand outcomes regarding these complex patient populations.

✓ Our center is one of the 44 worldwide centers participating in this trial.

Thank you