Freedom to fenestrate: How the Anaconda platform has impacted my practice

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Disclosure

Speaker name: Dr Peter Bungay

I have the following potential conflicts of interest to report:

- [X] Consulting for Terumo Aortic
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [ ] Other(s)

- [ ] I do not have any potential conflict of interest
10 YEARS AGO - FENESTRATED ANACONDA CONCEPT

- SMA
- Contralateral marker on POAK
- 8mm fenestration (at 3 o'clock)
- Additional support wires - top one immediately below fenestration.
PLATFORM SUITABILITY FOR FEVAR

• Accuracy of repositionable graft body
• Migration resistance
• Flexibility for angulated & tortuous anatomy
• Fenestrations of any size in any position
• Cannulation from brachial access possible
• No stents or column strength to compromise fenestrations in the short or long-term
• Tapering, pleating & flaring of grafts possible
Fenestrated Anaconda Evolution

June 2010

1st Fenestrated Anaconda implanted
November 2010
1st partially augmented valley device implanted

December 2010
1st fenestrated valley implanted

December 2010
1st fenestrated cuff implanted repairing failed EVAR

February 2011
1st fully augmented device implanted

May 2011
1st device greater than 80mm implanted
June 2011
1st fenestrated AUI implanted

August 2011
1st 4 fenestration device implanted

July 2011
1st custom leg device implanted

July 2012
1st joined body device implanted

October 2011
50th Implant

April 2012
100th Implant

September 2012
1st pleated device implanted
- July 2013: 1st short body flare removed implanted
- October 2014: 1st TEVAR/Anaconda combi implanted
- November 2015: 1st device with AFS implanted
- January 2016: 1st hooked leg implanted
- June 2015: 1000th Implant
- August 2016: 1st fenestrated leg implanted
October 2016
1st 125mm long body implanted

November 2016
1st 6 Fenestration device implanted

July 2017
2000th Implant

August 2017
1st CFD36 device implanted

Jan 2019
3000th Implant

March 2019
1st Custom LoPro 90 implanted
3634

Implants to date

Still to come...

2019
1st customised Thoraflex Hybrid device

2020
1st customised Thoracoflex device
ROYAL DERBY RESULTS

FIRST 100 ANACONDA FENESTRATED IMPLANTS
DERBY FEVAR TO JULY 2019

Number of patients: 100
Age (mean): 74 years (range 56-88)
Male : female 90 : 10

AAA diameter: 6.7cm (5.0 – 10.6cm)
AAA type: Short-necked 17
Juxtarenal 60
Para/suprarenal 16
Type 4 TAAA 4
Others 3 (2 1As, 1 IMAA)
GRAFTS

Number of fenestrations:

1 fen: 5
2 fen: 36
3 fen: 40
4 fen: 18
5 fen: 1  59% 3/4/5 fen

Total fens = 274

Target vessels (TV) in valley = 69

Totals TVs = 343
PROCEDURES

All performed in angiography suite

Time (inc. anaesthesia & access): 274 minutes (145-840)

Anaesthetic: GA : CSE 85 : 14

Access: Femoral only 42
         Brachial    10
         Axillary  48

Screening time: 65 minutes (26-375)

Contrast volume: 149 (60-425)
RESULTS

Mortality

• 30 day mortality 3%

1 MI post-discharge at day 12 (graft patent & AAA excluded)

1 multi organ failure on 8th POD secondary to perforated gastric ulcer (graft patent & AAA excluded)

1 multi organ failure on 2nd POD secondary to prolonged procedure and lower limb ischaemia
## RESULTS

### Endoleaks

<table>
<thead>
<tr>
<th>Type</th>
<th>Procedural (n=100)</th>
<th>30 day (n=97)</th>
<th>1 year (n=75)</th>
<th>2 years (n=54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1A</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>1.85%</td>
</tr>
<tr>
<td>Type 1B/C</td>
<td>1%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Type 2</td>
<td>24%</td>
<td>22.7%</td>
<td>10.7%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Type 3</td>
<td>3%</td>
<td>1%</td>
<td>2.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Freedom from type 1/3</td>
<td>93%</td>
<td>97%</td>
<td>97.3%</td>
<td>98.1%</td>
</tr>
</tbody>
</table>
# RESULTS

**Target vessels (n=343)**

<table>
<thead>
<tr>
<th></th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure:</td>
<td>339/343</td>
<td>98.8% (1 interval occlusion)</td>
</tr>
<tr>
<td>30 day:</td>
<td>337/343</td>
<td>98.3% (2 RA occlusions)</td>
</tr>
<tr>
<td>To date:</td>
<td>335/343</td>
<td>97.7% (1 RA, 1 CA)</td>
</tr>
<tr>
<td>TV re-interventions:</td>
<td>15/343</td>
<td>4.4%</td>
</tr>
</tbody>
</table>
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IMPACT ON FEVAR PRACTICE

- Repositionable graft body
- Flexibility of graft
- Cannulation from brachial access

Combination of features facilitates treatment of challenging anatomy
COMPLEXITY OVER TIME

Number of fenestrations

Number of grafts

- First 50 cases
- Second 50 cases
LAST 40 CASES

- Zero 30 day mortality
- 100% Target vessel cannulation & stenting
- No Type 1A/1B endoleak
- 99.3% target vessel patency with loss of only 1 target vessel at up to 4 years of follow-up
SUMMARY

• 3600 cases in 9.5 years of Anaconda Fenestrated

• Increased complexity of grafts over time

• Results improving despite this

• Combination of graft features allow safe treatment of complex anatomy
THANK YOU
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