So, where are we today – November, 2018?

Who to treat?

In all initially uncomplicated type B dissections, should we look for “high risk” features that predict early progression or just plan to treat all except those in whom the procedure may be difficult or at risk of complication?

Which patients should still be treated medically?

1. Pathology considerations
2. Anatomy considerations

These are relative and not absolute determinants of risk for sub-optimal outcomes with TEVAR management and reflect personal bias.
Which patients should still be treated medically?

1. Pathology considerations
   a. Chronic type B dissection

2. Anatomy considerations
   a. Involvement extending into Zone 2 (e.g., dissection hematoma)

Predictors of late aortic events after Stanford type B acute aortic dissection

- 117 patients
- Cox Regression

<table>
<thead>
<tr>
<th>Lumen State</th>
<th>5 year Event Free rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partially Thrombosed</td>
<td>59%</td>
</tr>
<tr>
<td>Fully Open</td>
<td>65%</td>
</tr>
<tr>
<td>Fully Thrombosed</td>
<td>96%</td>
</tr>
</tbody>
</table>

J Thorac Cardiovasc Surg 2013; in Press

Which patients should still be treated medically?

1. Pathology considerations
   a. Chronic type B dissection
   b. Connective tissue disease
   c. Completely thrombosed false lumen throughout full extent of process

2. Anatomy considerations
   a. Involvement extending into Zone 2 (e.g., dissection hematoma)
Which patients should still be treated medically?

1. Pathology considerations
2. Anatomy considerations
   a. Involvement extending into Zone 2 (e.g., dissection hematoma)
   b. Highly angulated arch (gothic, peaked, cathedral, etc.) with apex at proximal “neck” seal zone
Which patients should still be treated medically?

1. **Pathology considerations**
2. **Anatomy considerations**
   a. Involvement extending into Zone 2 (e.g., dissection hematoma)
   b. Highly angulated arch (gothic, peaked, cathedral, etc.) with apex at proximal “neck” seal zone
   c. PIT within visceral segment
   d. Unsuitable and un-reconstructable access to aorta
   e. Multi-barrel (>2) channels
Which patients should still be treated medically?

Management decision must be individualized for a given patient who may exhibit more than one high risk feature for sub-optimal TEVAR result

1. Pathology considerations
   a. Chronic type B dissection
   b. Connective tissue disease
   c. Completely thrombosed false lumen throughout full extent of process

2. Anatomy considerations
   a. Acute involvement extending into Zone 2 (e.g., dissection hematoma)
   b. Highly angulated arch (gothic, peaked, cathedral, etc.) with apex at proximal "neck" seal zone
   c. PIT within visceral segment
   d. Unsuitable and unreconstructable access to aorta
   e. Multi-barrel (>2) channels
   f. Other: sustained need for chronic anticoagulation

Analysis/Summary

- Patient risk profiles used to predict disease progression after aortic dissection are evolving from individual risk factors based on simple dimensional measurements to increasingly focus on physiological features including pressure and flow in both the true and false lumens throughout the cardiac cycle.
- Balanced FL inflow and outflow and equal pressures in both lumens are protective.
- In uncomplicated dissection, progression of disease is generally associated with limited FL outflow (FL flow imbalance, increase in FL diastolic pressure, partial FL thrombosis).
- After TEVAR with coverage of the primary entry tear, FL enlargement is frequently related to the number of septal fenestrations (relative mismatch in FL inflow/outflow).

Conclusion

The current focus of endovascular dissection management is expanding to include not only who should we treat, but who should we treat better.

i.e., the field is moving to increase our prognostic scope beyond how to assess the individual risk to a patient with uncomplicated type B dissection toward how best to predict the risk of disease progression after TEVAR.
Thank you