What Are The Drivers Of Cost For Treating SFA Occlusive Disease And Impact On Outcomes

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Presenter Disclosure Information

Richard J Powell, MD

FINANCIAL DISCLOSURE:
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Committees: Bard: LEVANT
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Purpose

• To determine what factors drive the cost of SFA interventions.

• To determine if increased cost (more complex devices) improves outcomes

Methods

• Retrospective chart review patients undergoing initial SFA stenting between Jan 1, 2010 and Feb 1, 2012.

• Exclusion criteria included SFA stenting with simultaneous iliac or tibial intervention and inpatient status.

Supply Cost

• This analysis focuses on procedure supply cost per case in hospital based setting.

• Supply cost includes the cost of all materials used for the procedure.

• Excludes indirect costs and salaries – Vary depending on health care setting

Total Cost vs. Procedure Supply Cost

$25,000
$20,000
$15,000
$10,000
$5,000
$0

0
5,000
10,000
15,000

Procedure Specific Supply Cost

R² = 0.64
**Cohort Characteristics**

- N = 98 cases
- Mean age: 70.8
- Male: 57%
- HTN: 82.6%
- HLD: 69.3%
- CAD: 26.5%
- DM: 39.8%
- CKD: 11.2%
- COPD: 21.43%

**Mean age: 70.8**
- Claudication: 61.2%
- CLI: 38.8%
- TASC A: 43.8%
- TASC B: 35.7%
- TASC C: 12.2%
- TASC D: 8.1%

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**Significant Variability of Supply Cost**

**Which Procedure Variables Impact Supply Cost?**

- Indication and TASC severity were evaluated to identify associations:
  - Mean Supply Cost
  - Use of Adjuncts
  - Number of Stents

**What Patient Specific Factors Impact Cost**

- Indication and TASC severity were evaluated to identify associations:
  - Mean Supply Cost
  - Use of Adjuncts
  - Number of Stents

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**Effect of Indication on Procedure Specific Supply Cost**

- No trend was found for cost and indication.
- Claudication
  - N = 60
  - Mean Supply Cost: $3,430
  - Adjunct Use (%): 18.3%
  - Number of Stents: 1 (70%), 2 (23.3%), 3+ (6.6%)
- CLI
  - N = 38
  - Mean Supply Cost: $4,206
  - Adjunct Use (%): 21.0%
  - Number of Stents: 1 (55.2%), 2 (31.6%), 3+ (13.1%)

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**Effect of Indication on Procedure Supply Cost and Cost Drivers**

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<thead>
<tr>
<th></th>
<th>Claudication N = 60</th>
<th>CLI N = 38</th>
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<tbody>
<tr>
<td>Mean Supply Cost</td>
<td>$3,430</td>
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<td>Adjunct Use (%)</td>
<td>18.3%</td>
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**Effect of TASC Severity on Procedure Specific Supply Cost**

A significant trend was found for cost and TASC lesion severity, $p < 0.01$.

**Effect of TASC on Supply Cost**

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<th>A: $2,458</th>
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**Defining High Cost Intervention**

High Cost Intervention: Highest quartile of procedure specific supply cost
Was Primary Patency at 1 Year Worse for High Cost Interventions?

\[ P = 0.63 \]

SE at 1 year = 10%
SE at 1 year = 5%

Low Cost: 78%
High Cost: 80%

Hospital Based Ambulatory Medicare Reimbursement

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<th>B</th>
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<tr>
<td>Margin $</td>
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<td>$143</td>
<td>-$1,471</td>
<td>$-5,347</td>
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Summary

- Increased supply cost is associated with adjunct device use, number of stents and TASC severity.
- Primary patency at 1 year is similar for high and low cost interventions, despite high cost interventions being associated with more complex lesions.

Conclusions

- TASC classification and lesion complexity drive the cost of endovascular SFA interventions. This should be taken into consideration by reimbursement agencies.
- The introduction of more expensive devices could potentially threaten the financial sustainability of endovascular SFA treatment.