Stent-graft Induced New Entry (SINE) after TEVAR for Type B AD

Introduction

Formation of new intimal tear resulting pseudoaneurysm or dissection at the end of the stent-graft from intimal injury has been reported as one of the most frequent complications in aortic stent-graft by many authors.

Chronic Complicated Type B AD

M / 46

Max Dia; 65 mm

Disclosure

I, Donald Lee, DO NOT have a financial interest / arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of this presentation.

Introduction

SINE (Stent-graft Induced New Entry); New tear caused by the stent-graft
11/18/2015

16 Weeks F/U

SMA

Renal

Celliac

M / 46

RAO

LPO

Rt. Renal A ?

M / 57

Stent-graft Induced New Entry (SINE)

- Incidence
- Complications
  - Aneurysmal change of F/L
  - Embolism
  - Malperfusion
- Risk Factors
- Treatment & Prevention
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Stent-Graft Tx of Chronic AD

5 month F/U

Sx: Sudden Lt. flank pain

Courtesy of Han-Young Jin, Busan, Korea

Stent-graft Induced New Entry (SINE)

- Incidence
- Complications
- Risk Factors
  - Chronic
  - Aortic Angulation
  - Oversizing
- Treatment & Prevention

Mean follow up duration: 52.7 months
Mean duration between TEVAR and SINE event: 29.7 months

<table>
<thead>
<tr>
<th></th>
<th>Acute (n=17)</th>
<th>Chronic (n=62)</th>
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<tbody>
<tr>
<td>SINE</td>
<td>1 (5.9%)</td>
<td>20 (32.3%)</td>
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<tr>
<td>Non-SINE</td>
<td>16 (94.1%)</td>
<td>42 (67.7%)</td>
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p = 0.032

SINE after TEVAR was more frequent in chronic aortic dissection than acute dissection.

→ Surgery or reintervention were needed in 47%.
Stent-graft Induced New Entry (SINE)

- Incidence
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Chronic Complicated Type B AD

Stent-Graft Tx of Chronic ADIII

Stent-graft Induced New Entry (SINE) after TEVAR for Type B AD

M / 64

3195389MPK

1 W F/U 1 Y F/U


3 M after 2nd SG Tx

M / 68

3195389MPK

4 Y F/U 4.5 Y F/U

Feb / 2014

May / 2014

Stent-graft Induced New Entry (SINE)

- Incidence
- Complications
- Risk Factors
  - Chronic
  - Aortic Angulation
  - Oversizing
- Treatment & Prevention
Summary

Stent-graft Induced New Entry (SINE) after TEVAR for Type B AD
- Incidence: 2.9 – 29%
- Complications
  - Aneurysmal change of F/L
  - Embolism
  - Malperfusion
- Risk Factors
  - Chronic
  - Aortic Angulation
  - Oversizing of Stent-Graft
- Prevention: Dissection specific device
  - Lower radial force
  - Higher flexibility
  - More tapering of distal segment

Prevention of SINE

Thank you for your attention