New Antegrade Approach Device using Dissection and Re-entry

The BridgePoint System

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The BridgePoint System

CrossBoss Catheter  Stingray Re-Entry System
CrossBoss™ Catheter

- Atraumatic 3F rounded distal tip
- 2.4F distal shaft diameter
- 6F guide catheter compatible
- 0.014" guidewire compatible (OTW)

Tracks via FAST Spin technique
Highly torqueable coiled-wire shaft
Spin should reduce push required
The Stingray™ Catheter & The Stingray™ Guidewire

Compatibly:
- 0.014” guidewire
- 6F guide catheter

- 0.019” diameter (0.48mm) lesion entry profile
- Self-orienting balloon has flat shape
- Offset exit ports for Stingray™ Guidewire
BridgePoint: When and Where?

- **Antegrade**
  - Single Wiring
  - Parallel Wiring
  - IVUS Guidance

- **Retrograde**
  - Channel Crossing
  - CTO Crossing

Note: CTO Crossing is unsuccessful.
BridgePoint: When and Where?

Antegrade
- Single Wiring
  - Parallel Wiring
    - IVUS Guidance
      - BridgePoint
  - Channel Crossing
  - CTO Crossing

Retrograde
- Channel Crossing
  - CTO Crossing

unsuccessful
BridgePoint: When and Where?

Antegrade

- BridgePoint
  - Parallel Wiring
    - IVUS Guidance
      - BridgePoint
  - Channel Crossing
    - CTO Crossing

Retrograde

- BridgePoint
  - Channel Crossing
    - CTO Crossing

in reattempted cases

unsuccessful
Case: Primary Use (Reatempt)

2008.9.19
1st Step: CrossBoss

Advance of CrossBoss
1st Step: CrossBoss

Rotation of CrossBoss
1st Step: CrossBoss

Rotation of CrossBoss

After removal of CrossBoss
2nd Step: StingRay

Advance of StingRay
2nd Step: StingRay

Inflation of StingRay
3rd Step: Reentry Wire

Checking of Reentry Wire

Advance of Reentry Wire

Reentry Wire

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3rd Step: Reentry Wire

Wire comes out from proximal port
3rd Step: Reentry Wire

Successful puncture
Standard technique
Final Angiogram
BridgePoint: When and Where?

Antegrade:
- Single Wiring
- Parallel Wiring
- BridgePoint

Retrograde:
- Channel Crossing
- CTO Crossing

unsuccessful
1st Attempt for LAD-CTO: Bail-out Use

diffuse narrowing
Failed parallel wiring
Successful puncture, however the wire could not be advanced.
Successful crossing with Fielder XT
Tips and Tricks of Bridge Point System

◆ Wire change after puncturing
BridgePoint: When and Where?

Antegrade
- Single Wiring
- BridgePoint (unsuccessful)
- IVUS Guidance

Retrograde
- Channel Crossing
- CTO Crossing

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1st Attempt for RCA-CTO: Bail-out Use

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Failed single wiring with Fielder XT
Go right!

From proximal port

Stingray balloon accessed
Deep puncture like Seldinger method

From proximal port
Final angiogram
Tips and Tricks of Bridge Point System

◆ Wire change after puncturing
◆ Deep puncturing
Deep puncture!
Successful crossing with Fielder XTR
BridgePoint: When and Where?

Antegrade

Single Wiring

BridgePoint

IVUS Guidance

BridgePoint

Retrograde

Channel Crossing

CTO Crossing

unsuccessful
LCx CTO Equivalent Lesion
Unsuccessful wiring 3 times
The 4th attempt
Fielder XT with Corsair
Successful wiring, however…
No balloon nor microcatheter crossed.
Crushing technique with another stiff wire
Wire fractured.
Knuckle wire with Fielder FC
Dilatation of subintimal space with Corsair
Stingray balloon delivery
Unsuccessful 1st puncture
Reposition of Stingray balloon and...
Deep puncture with reshaped Stingray GW
CTO Toyohashi Heart Center

Changing GW to Fielder XT
Successful re-entry procedure
1.25 mm Rotablator
Final angiogram
Tips and Tricks of Bridge Point System

◆ Wire change after puncturing
◆ Deep puncturing
◆ Stingray wire reshaping
1\textsuperscript{st} Attempt for LAD-CTO: Bail-out Use
No promising retrograde channel...
Antegrade subintimal tracking...
Corsair, Crossboss could not be advanced...
1.25mm ballooning 2.0mm balloon could be advanced.
Maybe we should go down...
Punctured...
Unsuccessful XTR crossing…
Subsequent several puncturing failed…
Collapsed distal lumen due to hematoma
Straw technique
to reduce hematoma
Tips and Tricks of Bridge Point System

- Wire change after puncturing
- Deep puncturing
- Stingray wire reshaping
- Straw technique
Baseline Lesion Characteristics
(N = 26)

<table>
<thead>
<tr>
<th>Target vessel</th>
<th>Retatempt</th>
<th>Calcification</th>
<th>Occlusion length &gt;20 mm</th>
<th>Reference diameter &lt; 3 mm</th>
<th>No stump or abrupt occlusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCA</td>
<td>15 (57%)</td>
<td>15 (57%)</td>
<td>17 (65%)</td>
<td>14 (54%)</td>
<td>18 (69%)</td>
</tr>
<tr>
<td>LAD</td>
<td></td>
<td></td>
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<tr>
<td>LCx</td>
<td></td>
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</tbody>
</table>

RCA, LAD, LCx

(JIC 2012;24:396-400)
Procedural Sequence and Outcomes  
(N = 26)

Primary use

- CB alone  
  - Success: N=5  
  - Failure: N=8  
  - Success: N=5

Rescue use

- after unsuccessful antegrade: 11 ante & retrograde: 2  
- Success: N=13 

Device Success: 81%

Procedural Success: 100%
IVUS Examination

< Successful Re-entry >

LCx

LAD

S1

S2

a
b
a
b

0.33mm
0.20mm
0.22mm

CTO

Toyohashi Heart Center

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IVUS Examination
< Unsuccessful Re-entry >

*after successful retrograde approach
IVUS Examination

< Successful vs. Unsuccessful Re-entry >

Intimal thickness

Successful puncture
*12 segments
0.33 ± 0.18 mm

Unsuccessful puncture
*9 segments
1.32 ± 0.36 mm

P = 0.001

(JIC 2012;24:396-400)
Summary of Bridge Point System

◆ A promising option by the antegrade manner

◆ In the antegrade approach, it may replace parallel wiring or IVUS guided intimal tracking depending on the case or procedural situation.

◆ In the case without the chance of retrograde approach, it must be a last resort for successful recanalization.

◆ We have to wait for long-term results of cases treated by Stingray system.
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