Trans-Radial Intervention for Chronic Total Occlusion

Heart Center of ShonanKamakura General Hospital

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Why not TRI ???

- Transradial Intervention (TRI) has an advantage
  - vascular complication ↓
  - patients’ comfort ↑
  - realize the minimum invasive PCI
TRI can ...

- Acute Coronary Syndrome
- Rotablator and DCA
- Left Main Trunk disease
- Chronic Total Occlusion
Improvement of Guidewire

- Special making for CTO
  - Miracle series
- Tapered-tip
  - Cross-it series
- Tapered-tip and hydrophilic coating
  - Conquest family
- Gold coil-tip (hydrophilic) coating
  - Athlete GT Magic series
    - Magic FA=first approach
Limitations

- Contra-lateral angiography
  - Discussion of case
  - Femoral approach
- Dialysis patient
- Back-up support of guiding catheter
  - Assist by rotablator
  - Anchor balloon technique
  - 5 in 6 technique
Increase a support

- New technique for superior guiding catheter support during advancement of a balloon in coronary angioplasty: the anchor technique.
  
  Fujita S, Tamai H  
  CCI 2003 Aug.59

- New method to increase a backup support of a 6 French guiding coronary catheter. 5 in 6
  
  Takahashi S, Saito S  
  CCI 2004 Dec.63
## Latest result of CTO

**2003.8~2004.3 (DES era in Japan)**

- 78 cases of CTO in Shonankamakura GH
- Procedural success: 70/78 (89.7%)

<table>
<thead>
<tr>
<th>Type</th>
<th>TRI</th>
<th>TFI</th>
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<tbody>
<tr>
<td>6F</td>
<td>49</td>
<td>6F</td>
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<tr>
<td>7F</td>
<td>3</td>
<td>7F</td>
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<tr>
<td>Success</td>
<td>48 (92.3%)</td>
<td>Success</td>
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</table>
Procedure

- Procedure time: 87 ± 37 min
- Contrast medium: 186 ± 88 ml

Treatment
- Cypher stent: 45
- BMS: 22
- POBA: 4

- Stent: 2.4 ± 0.7
  - Length: 42.1 ± 18.1

- Guidewire: 2.4 ± 1.2
Vs Previous experience

- 2000~2002
  - Success rate: 74.7%
  - Guidewire: 3.2 ± 1.9

- 2003~2004
  - Success rate: 91.0%
  - Guidewire: 2.4 ± 1.2
Guidewire first choice

- Athlete GT magic FA  44
- Other soft wire  19
  - Balance, BMW, whisper LS, etc.
- Other hard wire  15
  - Magic S, EX, Conquest pro, etc.
Guidewire  good job

- Athlete GT magic FA  32
- Athlete GT magic S, EX  7
- Conquest pro 12  7
- Conquest pro  6
- Cross it 300  3
- Miracle  2
- Other soft wire  13
## Strength of tip

<table>
<thead>
<tr>
<th>Item</th>
<th>Strength</th>
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<tr>
<td>Athlete GT magic EX</td>
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<tr>
<td>Conquest pro 12</td>
<td>12</td>
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<tr>
<td>NEO’s miracle 12</td>
<td>12</td>
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<tr>
<td>Athlete GT magic S</td>
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<td>ACS cross it 400XT</td>
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<td>Terumo cross wire</td>
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<tr>
<td>Intermediate</td>
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<tr>
<td>BMW</td>
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conclusion

- TRI is safe and effective enough for CTO, and can reduce the useless bleeding and save the contrast medium, and realized minimum invasive intervention.

- Tapered and hard guidewire were effective but it is not necessarily. Half of cases of CTO were able to treat successfully without hard wire.