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Usefulness of Guideliner PV in Endovascular Therapy for Severely Calcified below the knee artery disease the strategy of “JADE-Liner”

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Disclosure

Speaker name: Hideaki Aihara

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I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest



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background



- ✓ Severely calcified lesions are often experienced in the CLI.
- ✓ Thanks to the technical progress of the guide wire, the success rate of advancing guide wire has increased even in the tough CTO case.
- ✓ However, even though the guide wire successfully passes the lesion, next device **CAN NOT PASS** through especially in BTK-CTO lesion.



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GW pass through the CTO but microcatheter and/or balloon **CAN NOT be delivered...**

1. Crosser
2. TornusPV
3. GW cracking (014, 018, 035, tail, cut tail)
4. Direct needle cracking from outside (PIERCE)

After Externalization

5. Tugging delivery (ex. Tugged TornusPV)
6. Bad form

Off-label in JAPAN

7. Child and mother catheter technique
8. Brockenbrough needle
9. Rotablator (1.25burr)

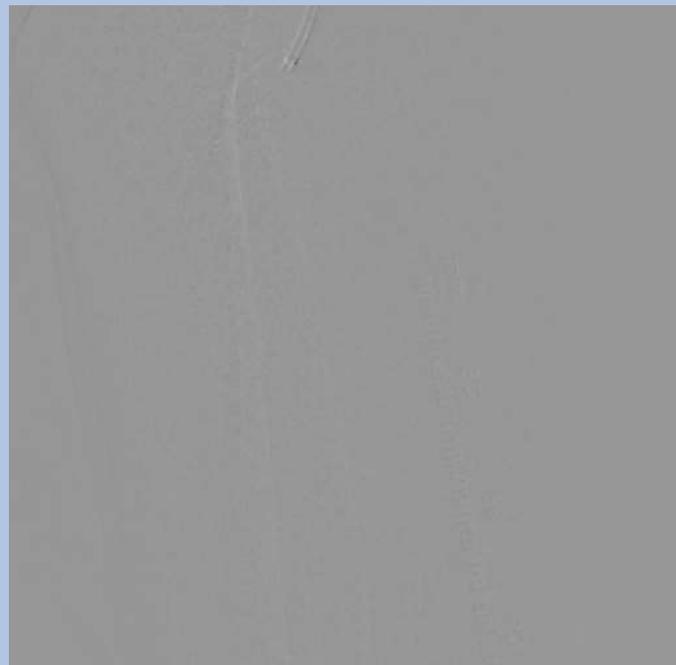




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GW pass through the CTO
but microcatheter and/or balloon
CAN NOT PASS...

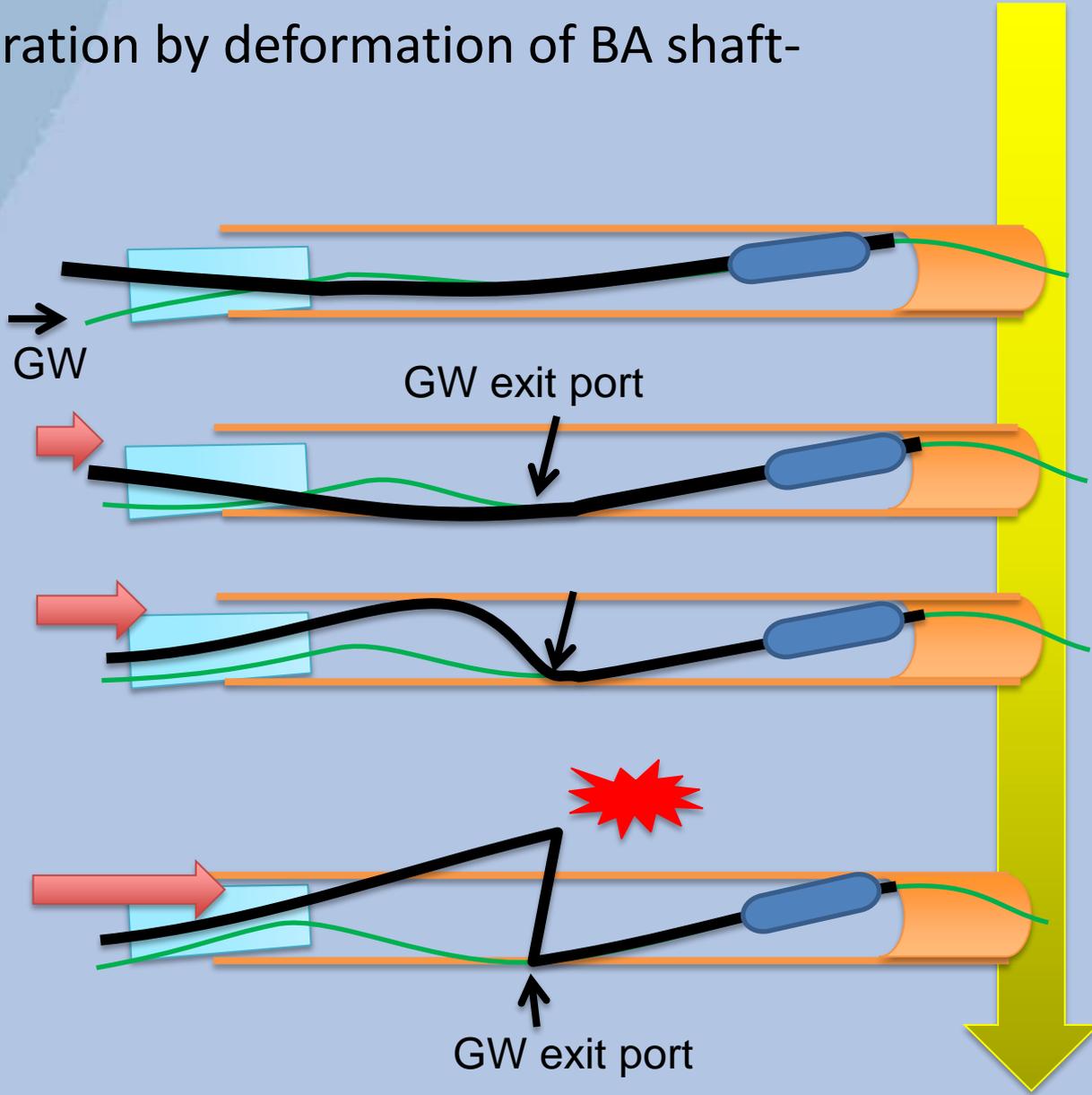
If you push RX balloon to the limit ...





If you push RX balloon to the limit

-vessel perforation by deformation of BA shaft-



2 solution for weak point of RX balloon

-how to protect GW exit port-

Conventional issue



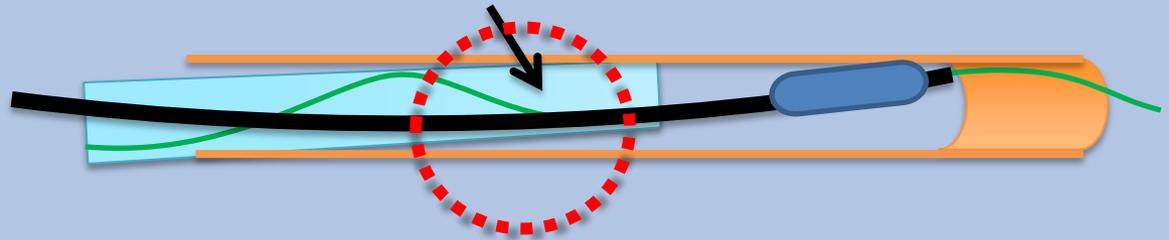
A

Longer guidewire lumen length



B

Sheath extension



✓ In order to avoid vascular damage due to shaft deformation, it is necessary to protect the guide wire exit port.

A to use balloon with longer length of guide wire monorail lumen

B to extend the length of the sheath and protect the guide wire exit port

JADE and Guideliner

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A

Longer guidewire lumen length



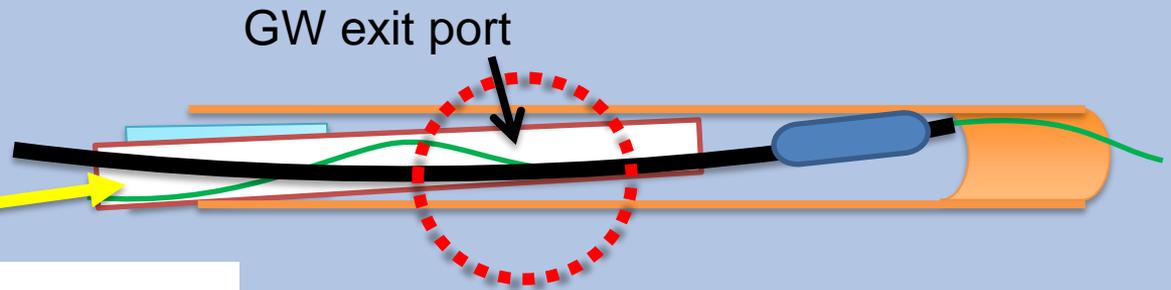
GW exit port



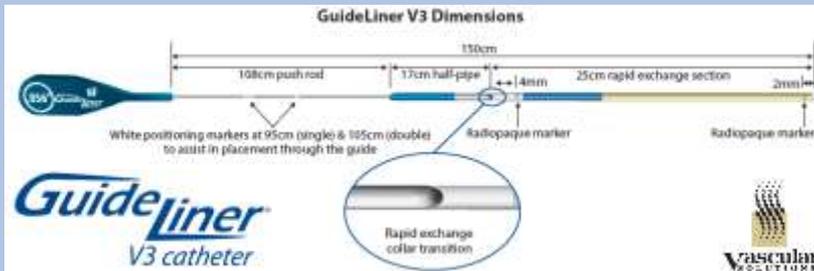
✓ “JADE is 0.014 compatible non-compliant balloon that has the longest guidewire lumen length (60cm) for strengthening pushability.”

B

Sheath extension



GW exit port



✓ “Guideliner” of sheath extension protect GW exit port and makes strong backup.



82 Male It.CLI RC5

HTN, DM, SMK, hemodialysis for over 10 years

Target: It.PA-DPA

Procedural steps

1. ipsilateral approach
2. 4.5Fr-55cm guiding sheath
3. 0.014 GW (tapered stiff) + microcatheter
4. Tapered stiff 0.014inch guide wire passed relatively easily CTO part, but any device was unable to pass the lesion.





“JADE-Liner”

combination of 2.0mm **JADE** balloon and guideliner 6Fr

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2.0mm POBA

Guideliner advance

BA pass with Guideliner



- ✓ “JADE-Liner” is the strategy to use JADE 1.5 or 2.0mm in combination with Guideliner 6Fr, advancing each device alternately step by step.
- ✓ Although each one is sufficiently effective, “JADE-Liner” is one of the most efficient strategies in case of severely calcified BTK lesion.



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Final angio

pre

post





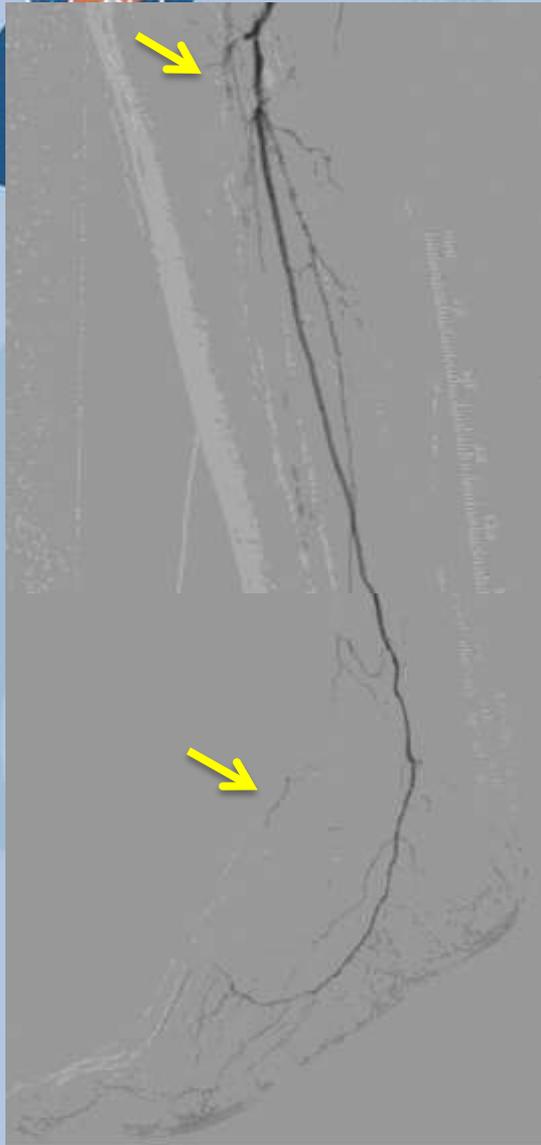
68 Male It.CLI RC5

HTN, DM, hemodialysis for 10 years

Target: It.ATA

Procedural steps

1. ipsilateral approach
2. 4.5Fr-55cm guiding sheath
3. 0.014 GW (tapered stiff) + microcatheter
4. Tapered stiff 0.014inch guide wire passed CTO part antegradely, but any device was unable to pass the lesion in the middle of CTO.





"JADE-Liner"

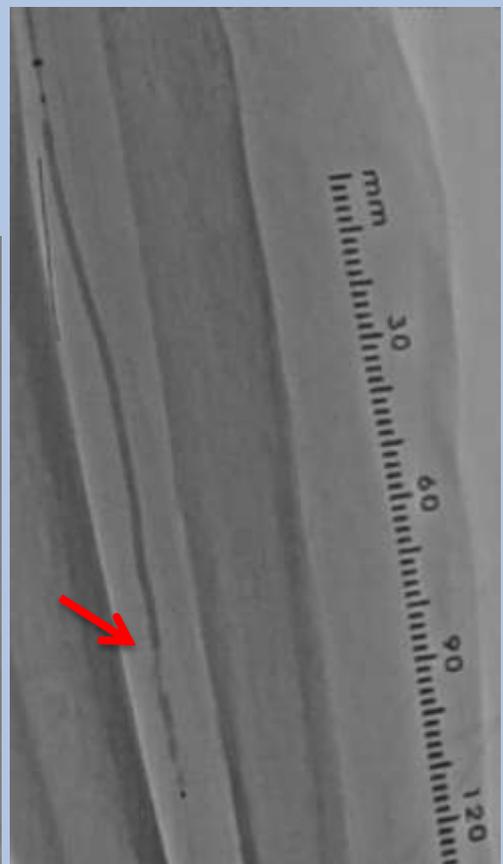
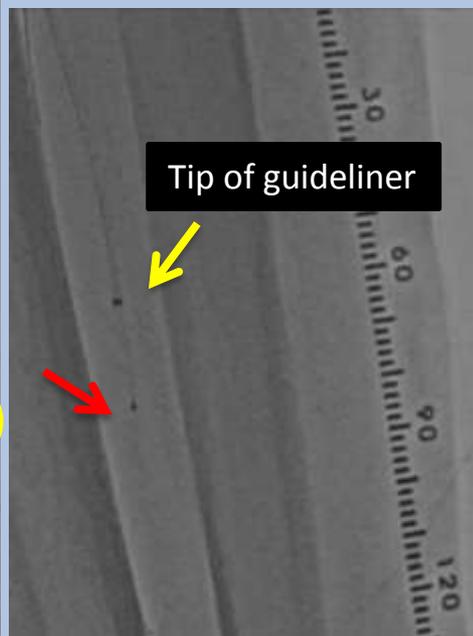
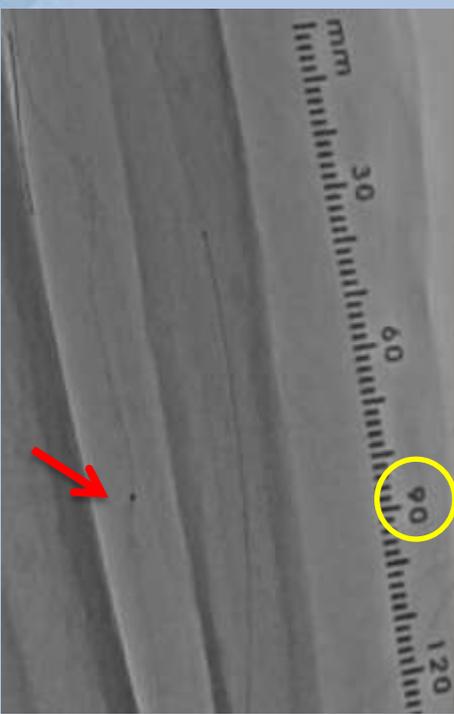
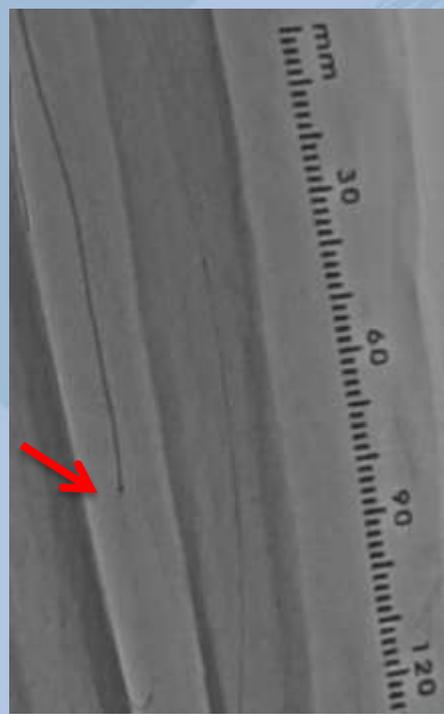
combination of 1.5mm **JADE** balloon and guideliner 6Fr

MC not pass

Balloon not pass

JADE pass with Guideliner

POBA
1.5mm JADE



Amphirion deep 2-2.5/210





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Take away message

- ✓ “Guideliner” of sheath extension makes strong backup and facilitates placement of interventional devices.
- ✓ Non-compliant rapid-exchange balloon “JADE” has strong pushability thanks to longest guidewire lumen length.
- ✓ “JADE-Liner” is one of the most effective and safe strategy in case of severely calcified BTK lesion, because you can push system with stronger force.



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