Overcome the Calcified Plaque Using Endovascular Therapy

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Disclosure Statement
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Consulting for
Cordis
Boston Scientific
Terumo
Asahi Intecc
Kaneka
Tokai Medical Products
Future Medical Devices
Goodman
Medikit
EVT devices for calcified lesions

Crosser (Bard)
Diamondback (CSI)
Turbo Elite (DVx)
Turbohawk (Medtronic)
JetStream (Boston)
Phoenix Atherectomy System
Crosser system became available in Japan since Apr. 2014, as a CTO crossing device.

Crosser application for the purpose of debulking is still **off-label use!**
New technique 1

Crossbow

CROSsor® supported by bended 0.014 wire
Guidewire bias for directional ablation
Technical tips

Guidewire bias for directional ablation
Technical tips

It is hard to keep appropriate position in eccentric lesions.
Double bended guidewire greatly reduces the whip motion of the system
Crossbow case 1

Control angio  Crossbow  After Crossbow  After POBA
Crossbow case 2

Control angio  After Crossbow  After POBA

CO2 angiography
How to perform Crossbow technique
Advance a soft guidewire beyond the lesion
Advance a microcatheter beyond the lesion
Remove the guidewire
Advance a double-bended guidewire through microcatheter

Naveed4 15g

A specialized guidewire for Crossbow technique will be released soon
Remove the microcatheter
Withdraw the guidewire
Withdraw the guidewire

Distal bending point
Advance Crosser to the distal bending point
Advance Crosser and guidewire together
Withdraw Crosser and guidewire
Advance Crosser and guidewire together
Withdraw Crosser and guidewire
Advance Crosser and guidewire together
New technique 2
Rambo technique
Naked CROSSBOW
Contralateral vs. Ipsilateral

CROSSER® Catheter 14S

19.1% better

N=60

Crossing Efficiency

Contralateral

Ipsilateral
Naked CROSSBOW
Rambo Technique
Another case treated by Rambo Technique
Summary

Crosser® can improve initial outcome of the EVT for severely calcified lesions.

CROSSBOW and Rambo techniques are very useful to debulk eccentric calcified lesions. Of cause, at your own risk.