



Atherectomy: Data and current developments



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Disclosure

Speaker name:

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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

Atherectomy: Is there a role?



Restenosis after PTA or stenting
+ the need for re-interventions

are the **main limitations** in the
femoropopliteal segment

Contemporary strategies to
overcome these limitations:

Antiproliferative drugs

Debulking

Atherectomy: Is there a role?



Different debulking mechanisms:

directional, orbital, and rotational

Atherectomy: Is there a role?

Rationale:

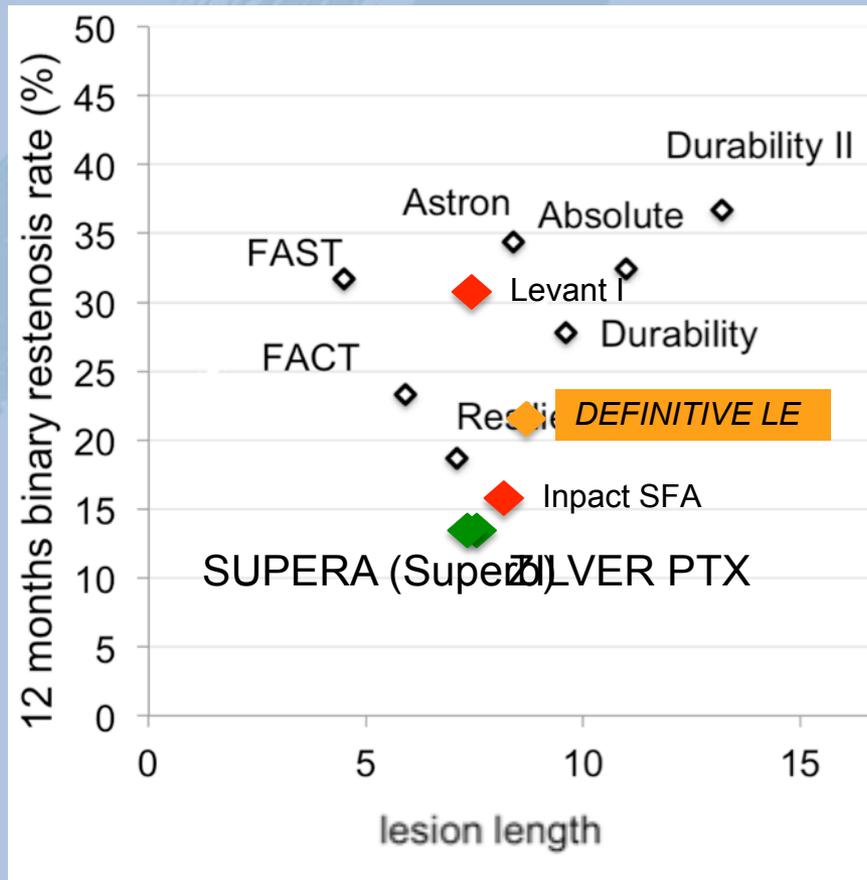
- less barotrauma
- less dissections
- less bailout stenting
- potentially less intima hyperplasia
 - vessel compliance is reserved
 - "leaving nothing behind" concept

Atherectomy: Is there a role?

Cons:

- Potential for embolization
- Need for embolic protection devices
 - high costs
- higher radiation exposure
 - time consuming

Atherectomy: Is it more effective than BMS/DCBs



*Definitive LE:
SilverHawk Device
800 patients
mean LL 8cm
PP 1y: 78%*

Atherectomy: Is it more effective than BMS/DCBs

Study	Device	Design	Endpoint
DEFINITIVE LE (2014)	Silverhawk (Medtronic)	Single-arm, prospective, 800 pat.	PP 12Mo: 78%
COMPLIANCE 360° (2014)	Diamondback 360° (CSI)	Randomized to PTA, 50 pat.	PP 6Mo: 77%
CELLO (2009)	Excimer Laser (Spectranetics)	Single arm, prospective, 56 pat.	PP 12Mo: 56%
Jetstream RCT (2011)	Jetstream (Pathway)	Single arm, prospective, 172 pat.	PP 12 Mo 61.8%

Atherectomy: Is it more effective than BMS/DCBs

Not enough evidence to support this theory

Need for RCTs with clinical endpoints

Atherectomy: Combination with DCBs

→ high acute *procedural success* with atherectomy
(low bail-out stenting rates)

→ effective *antiproliferative therapy* using DCBs

*could be an important strategy
in treating femoropopliteal disease.*

Atherectomy: Combination with DCBs - Data

Cioppa et al. (2009)

Silverhawk + Inpact DCB

30 patients

12 months TLR rate: 10%

Scheer et al. (2014)

Rotarex (Straub) + Inpact DCB

29 patients

6 months restenosis rate: 6.9%

Atherectomy: Combination with DCBs - Data

Definitive AR study

Silverhawk + Inpact DCB vs. DCB alone

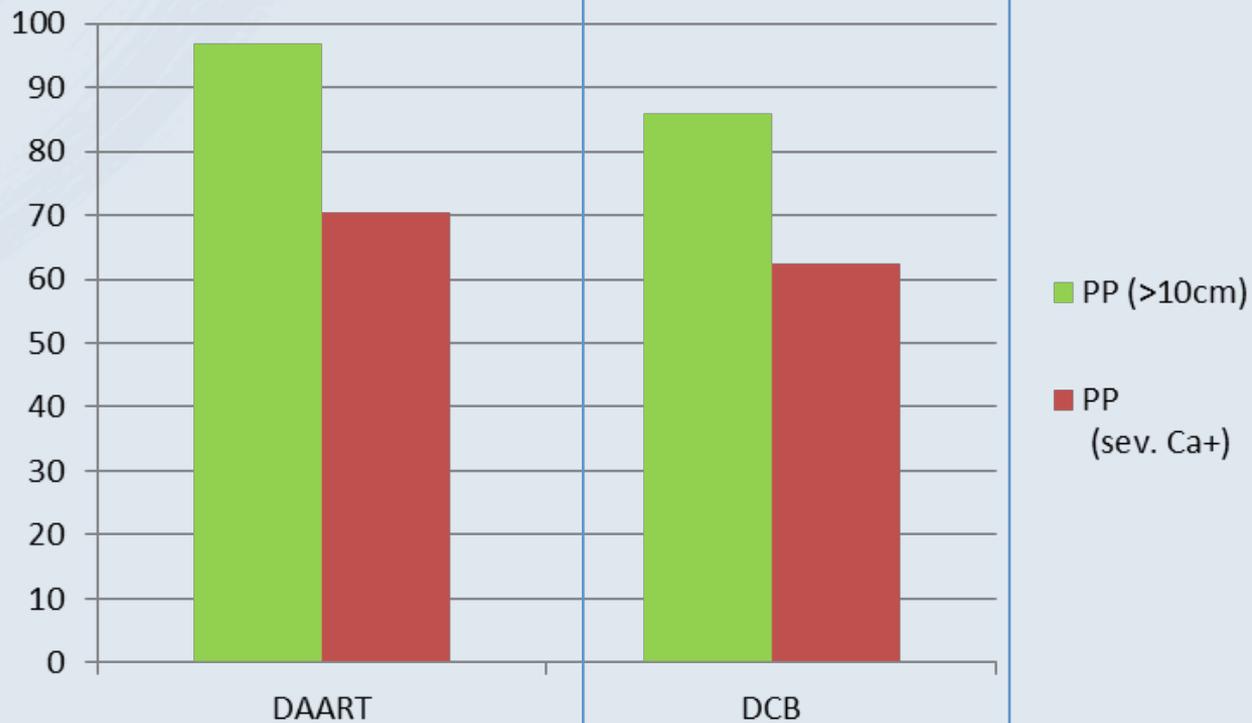
*Primary endpoint: 1y angiogr. restenosis
33.6% vs. 36.4% (control arm, n.s.)*

*Better results in patients with more plaque
removal*

DCBs: Limitations: Calcification

DEFINITIVE AR 12m results

Atherectomy+DCB vs. DCB+PTA



Atherectomy ±DCBs

Evidence does not support routine use

Potential in severely calcified lesions

Randomized data are mandatory

*Theoretical potential has – until now –
not been translated into clinical benefit*

Cost-effectiveness !



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