Debulking prior to stenting may be beneficial in unprotected left main stenting

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Compared with the stenting alone, the debulking +stenting have a significantly lower rate of angiographic restenosis (8.3% vs. 25.0%, p=0.034) in 127 unprotected left main stenting series. Serial IVUS comparison of pre-intervention and post directional atherectomy at same pre-intervention lesion site was performed in 24 of 30 lesions with directional atherectomy + stenting. The plaque burden decreased from 86% to 55% and lumen increased from 2.6 $\pm$ 0.9 mm^2 to 8.9 $\pm$ 2.0 mm^2 after directional atherectomy. Plaque + media CSA decreased from 19.9 $\pm$ 6.5 mm^2 to 12.1 $\pm$ 5.6mm^2, a 30% reduction.

Baseline angiographic characteristics and procedural results (%)

	Debulking + Stenting	Stenting alone	**P**
Number of lesions	40	87	
Reference vessel diameter (mm)	4.0 ± 0.6	4.0 ±0.7	0.547
Minimal lumen diameter (mm)			
Pre-intervention	1.1 ± 0.4	1.1 ± 0.5	0.896
Post-intervention	4.2 ± 0.7	4.0 ± 0.6	0.177
Follow-up	2.8 ± 1.0	2.7 ± 1.1	0.699
Pressure (atm)	15.0 ± 3.1	15.4 ± 2.5	0.284
Angiographic follow-up (%)	36/ 37 (97)	64/ 69 (93)	0.314
Angiographic restenosis rate (%)	3/ 36 (8.3)	16/ 64 (25.0)	0.034

Debulking + stenting patients had a lower restenosis rate even though the reference diameter, QCA final MLD, and IVUS final lumen were similar to the stenting alone patients. This suggests that the plaque, itself, may contribute to the restenosis process and supports the promise that debulking + stenting may reduce restenosis.