

Impact of Vessel Size on Outcomes following Successful Chronic Total Occlusion Intervention; Six-month Angiographic and 2-year Clinical Outcomes

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Purpose: The aim of this study was to investigate the angiographic and clinical outcomes between small vessel CTO and large vessel CTO. **Methods:** A total of 291 consecutive patients (pts) underwent CTO intervention were divided into two groups according the reference vessel. Six-month angiographic and 24-month clinical outcomes were compared between the two groups. **Results:** The baseline clinical characteristics were similar between the two groups except old age was more frequent in small vessel CTO. In-hospital complications were similar between the two groups. Both groups had similar angiographic outcomes at 6 months and clinical outcomes up to 2 years including TLR, TVR and MACE (Table). In multivariate analysis, old age was a predictor for MACE who underwent PCI for CTO (OR;1.038, CI 1.006-1.072, p=0.019). **Conclusion:** The safety profile, long-term angiographic and clinical outcomes were similar between the small vessel CTO group and the large vessel CTO group in the DES era. Long-term randomized clinical trials with larger study population will be necessary to elucidate the final conclusion.

Variables, n (%)	Small vessel (N=73)	Large vessel (N=94)	P-value
6-month angiographic follow-up			
In-stent restenosis (< 50%)	24 (32.9)	29 (29.8)	0.737
Bleary restenosis (> 50%)	15 (20.5)	13 (13.8)	0.298
TLR, mean %	29.97 ± 28.31	26.85 ± 23.66	0.459
MLD, mean	1.865 ± 0.785	2.351 ± 0.779	0.001
Late loss, mean	0.572 ± 0.738	0.618 ± 0.755	0.719
24-month clinical outcomes	(N=123)	(N=140)	P-value
Death	7 (5.7)	9 (6.4)	1.000
Cardiac death	3 (2.4)	3 (2.1)	0.700
Non-cardiac death	4 (3.3)	6 (4.3)	1.000
Ami MI	3 (2.4)	4 (2.9)	1.000
Q wave	3 (2.4)	3 (2.1)	0.700
Repeat PICA	16 (13.0)	23 (16.4)	1.000
TLR	11 (8.9)	17 (12.1)	0.842
TVR	12 (9.8)	21 (15.0)	0.575
Neto TVR	3 (2.4)	2 (1.4)	0.653
All MACE	22 (17.9)	32 (22.9)	0.879
TLR MACE	13 (10.6)	22 (15.7)	0.586
TVR MACE	19 (15.4)	21 (15.0)	0.533