10064

Impact of Successful Percutaneous Coronary Intervention on Chronic Total Occlusion Outcomes in Patients with Well-developed Coronary Collateral Flow

[1]Korea University Guro Hospital

Seung-Woon Rha[1],Se Yeon Choi[1],Jae Kyeong Byun[1],Byoung Geol Choi[1],Hu Li[1],Jin Oh Na[1],Cheol Ung Choi[1],Hong Euy Lim[1],Jin Won Kim[1],Eung Ju Kim[1],Chang Gyu Park[1],Hong Seog Seo[1],Dong Joo Oh[1]

Background: The impact of percutaneous coronary intervention (PCI) for chronic total occlusion (CTO) in patients (pts) with developed collaterals is not clear. We compared pts treated by PCI with optimal medical therapy (OMT) alone for CTO lesions in pts with well-developed collaterals.

Methods: A total of 618 consecutive CTO pts with collateral flow grade 2 or 3 were divided; one group underwent PCI (PCI group; n=330) and the other group was treated with OMT (OMT group; n=288).

Results: At baseline, the OMT group had higher prevalence of elderly, multi-vessel disease, cerebrovascular-accident and lower LVEF, whereas the PCI group had a higher prevalence of prior PCI, LAD CTO. After baseline adjustment by cox proportional hazards regression, clinical outcomes up to 5-year showed the incidence of mortality and myocardial infarction (MI) was lower the PCI group, despite of higher incidence of revascularization (Table).

Conclusions: In our study, PCI for CTO lesions in pts with well-developed collaterals reduces the incidence of mortality and MI despite of higher incidence of revascularization.

Table. Cumulative Incidence of Clinical Outcomes Up to 5 Years

Variables, %	OMT (n=288)	PCI (n=330)	P-value	Hazard Ratio	95% C.I
Death	8.5%	1.7%	0.012	0.279	0.1-0.75
Cardiac Death	3.9%	1.0%	0.139	0.370	0.1-1.38
Myocardial Infarction	5.2%	0.7%	0.012	0.142	0.03-0.65
STEMI	1.8%	0.3%	0.094	0.149	0.02-1.39
Cerebrovascular Accident	1.5%	0.7%	0.598	0.634	0.12-3.46
Revascularization	11.2%	17.0%	0.012	1.794	1.14-2.82
Target lesion (CTO vessel)	2.7%	9.4%	0.002	3.484	1.58-7.7
Target vessel (CTO vessel)	3.0%	11.8%	0.000	4.179	2-8.73
Non-target vessel (Non-CTO vessel)	10.0%	8.0%	0.799	1.075	0.62-1.88
Total MACE	16.6%	24.9%	0.365	1.196	0.81-1.76

Adjusted by gender, age, myocardial infarction, hypertension, diabetes, dyslipidemia, heart failure, chronic kidney disease, peripheral artery disease, cerebrovascular accident, current smoker and multi-vessel disease