

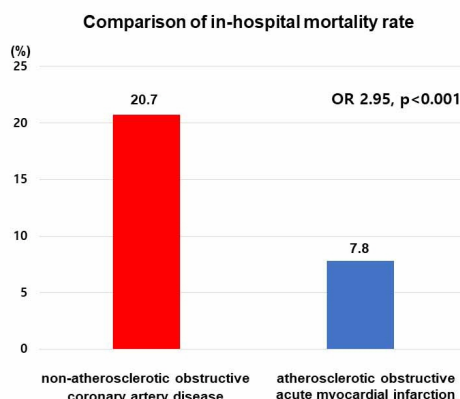
High mortality in patients with non-atherosclerotic obstructive CAD presenting for primary PCI

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Background/Aims: A proportion of patients with suspected acute myocardial infarction (AMI) have non-atherosclerotic obstructive coronary artery disease (CAD). We sought to determine the mortality of non-atherosclerotic obstructive CAD presenting for primary percutaneous coronary intervention (PCI). **Methods:** We reviewed the retrospective registry data for consideration of primary PCI along with critical pathway system, in single tertiary hospital from 2011 to 2017. Non-atherosclerotic obstructive CAD included the patients who underwent angiography that needed no PCI. **Results:** 164 patients (8.7%) were non-atherosclerotic obstructive CAD (mean age of 61±16 years, 30.7% female). Major etiology of non-atherosclerotic obstructive CAD was found as cardiogenic cause (61.7%) including coronary spasm and Takotsubo cardiomyopathy. Compared with patients with atherosclerotic obstructive AMI, non-atherosclerotic obstructive CAD patients had low prevalence of diabetes, hypertension, dyslipidemia, and left ventricle systolic dysfunction. And, non-atherosclerotic obstructive CAD patients had high prevalence of anemia, renal dysfunction, and elevated levels of high sensitivity C-reactive protein. In-hospital mortality rate of non-atherosclerotic obstructive CAD was significantly higher compared with atherosclerotic obstructive AMI (34 of 164 patients, 20.7% vs. 133 of 1700 patients, 7.8%, OR 2.95, $p<0.001$) (Figure 1). **Conclusions:** Compared with patients with atherosclerotic obstructive AMI, non-atherosclerotic obstructive CAD was associated with higher in-hospital mortality rate in presenting for primary PCI. Further evaluation and intensive treatment as etiologies should be needed in these patients.

Figure 1.



Different Target Vessel May Have Different Prognosis following Chronic Total Occlusion Intervention

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Background/Aims: Chronic Total Occlusion (CTO) Intervention is considered a challenging procedure due to the limited procedural success rate and high target failure. Moreover it is unclear whether the left anterior descending artery (LAD) lesion significantly impact on angiographic and clinical outcomes in patients with CTO, treated with drug-eluting stents (DES) compared to those of non-LAD lesions. This study is to evaluate whether the CTO patients with LAD lesions have worse angiographic (6-months follow up) and clinical outcomes (12-months follow up) compared to CTO patients with non-LAD lesion under CTO intervention with DESs. **Methods:** A total of 212 patients underwent CTO intervention with DESs were divided according to the different target CTO lesions (LAD CTO N=86 pts, Non-LAD CTO N=126 pts). Six-month angiographic and twelve-month clinical outcomes were compared between the two groups. **Results:** The baseline clinical characteristics were balanced. The overall procedural success rate was similar between the two groups (95.9% vs. 94.0%, $p=0.543$). Procedural characteristics and procedure-related complications including perforation and dissection were not different between two groups. Both groups had similar six-month angiographic outcomes and clinical outcomes up to 12 months except that cardiac death was higher in the LAD CTO group. However, after multivariate analysis, LAD CTO was not an independent predictor of cardiac death. (OR: 4.971 CI: 0.313-1.982, p -value: 0.996) **Conclusions:** The safety profile and mid-term angiographic and clinical outcomes were similar between the two groups except for the higher incidence of cardiac deaths in LAD CTO group. Long-term follow up with larger population analysis would be necessary to support the final conclusion

Variables, n (%)	LAD CTO (n = 86 pts)	Non LAD CTO (n = 126 pts)	P Value
6 to 9 Month Angiographic FU			
Binary restenosis	8 (28.1)	11 (25.5)	0.796
FU MLD(mm, mean ± SD)	1.77±0.79	1.86±0.74	0.623
Late loss (mm, mean ± SD)	0.99±0.87	1.00±0.80	0.963
% Restenosis	36.25±27.92	33.75±25.13	0.693
12-Month Clinical Outcomes			
Total death	4 (5.1)	1 (0.8)	0.058
Cardiac death	3 (3.8)	0 (0.0)	0.030
Q-wave MI	0 (0.0)	0 (0.0)	-
TLR	6 (7.9)	9 (7.4)	0.906
TVR	7 (9.2)	11 (9.1)	0.977
Total MACE	12 (15.4)	14 (11.6)	0.436
TVR-MACE	12 (15.4)	12 (9.9)	0.248