RESULTS The failure rate of CTO PCI was 10.5 % cases. The causes of failure were found to be most commonly coronary guide wire could not cross the lesion, balloon Uncrossable lesions followed by unable to deploy stent due to no satisfactory TIMI (less than TIMI III) flow.

In 35 patients (7.99) coronary guide wire could not able to cross the lesion. The balloon uncross able lesions were found in 29 (7.19 %) patients. The involved vessels were most commonly RCA in 14 patients (44.82 %) followed by LCA in 8 patients (27.58 %) and LAD in 7 patients (24.13 %). In four patients (0.9 %) unable to deploy the stent due to long dissection; small vessels, diffuse disease, unyielding lesions and achieved flow less than TIMI III.

The various techniques to increase guiding catheter support and to modify the lesion were considered in balloon uncross able lesions. We successfully facilitated the balloon and achieved adequate lesion dilation in 22 patients (75.86 %) out of 29 patients. All the cases of CTO PCI were done with guiding catheters of 7, 8 Fr size with good back up support as per decided as initial strategy. In spite of all these various techniques, in 7 patients (24.12 %) lesions were resistant to cross with the balloon. The lesion site calcification was inevitable present in all patients. The tortuosity at lesion site was noticed in 5 patients (4.5%). Even with all strategies resistant balloon Uncrossable lesions to leading to CTO PCI failure were observed in 1.59 % of total cases.

CONCLUSION The second most common cause of CTO PCI failure is balloon Uncrossable lesions in spite of successful wire positioning in the distal true lumen. In this study we observed Uncrossable lesions in 7.19 % cases. The resistant balloon Uncrossable lesions still contributed in 1.59 % cases of CTO PCI failure in spite of adaptation of multiple techniques. The calcification and tortuosity at the lesion site primarily accounts for it. The main principle behind to achieve success in CTO PCI of such lesions is to have a strategy for good guide backup support. Once good guide backup support is achieved and there still remains a difficulty in crossing the lesion, lesion modification should be considered. The various technical options are available to facilitate the balloon across the Uncrossable lesions. The simultaneous and sequential applications of various techniques are used to gain a final successful outcome. We feel Uncrossable lesions in spite of good guide support should be tackled initially Corsair microcatheter followed side branch balloon anchor technique. The utilization of various other above mentioned techniques, Torus microcatheter and rotational atherectomy should be considered as a last resort as per depending upon operators comfort and experience. The resistant balloon Uncrossable lesions should be treated with optimal drug therapy or coronary artery bypass surgery by considering disease status of other vessels and myocardial are supplied by these lesions.

TCTAP A-043
Comparison of Angiographic Morphological Features of Epicardial Collateral Channels According to Cardiac Chamber
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BACKGROUND The aim of study was to evaluate angiographic morphological features of epicardial collateral channels (CCs) on each cardiac chamber.

METHODS We reviewed 235 epicardial CCs of 155 proximal CTOs, which were divided into three groups: LV-CC (n=86), RV-CC (n=60), and Atrial-CC (n=76) to compare tortuosity.

RESULTS Plane tortuosity (two-dimensional) such as V, Z, Ω and snake-like morphology and three-dimensional tortuosity such as loop, corkscrew-like morphology were less frequent in LV-CC than RV or Atrial-CC (32% vs. 54% vs.48%, p=0.008), (25% vs. 78% vs. 71%, p<0.001).

CONCLUSION LV-CC has a nature of less tortuous compared with RV or Atrial-CC.

TCTAP A-044
The Impact of the Presence of Chronic Total Occlusion in a Non-Infarct-Related Coronary Artery in Acute Myocardial Infarction Patients: Validation in a Subset of Patients with Preserved Left Ventricular Function After Successful Primary Percutaneous Coronary Intervention
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BACKGROUND Chronic total occlusion (CTO) in a non-infarct-related artery was reported to worsen immediate clinical outcome in acute myocardial infarction (AMI) patients. However, the prognosis of such patients with preserved left ventricular function after successful primary percutaneous coronary intervention (PCI) has not been clarified yet. We aimed to evaluate whether the presence of CTO contributes to worse prognosis even in patients with preserved left ventricular function after primary PCI.

METHODS We retrospectively analyzed 353 consecutive patients with acute myocardial infarction, whose left ventricular ejection fraction (LVEF) was not less than 40% in the echocardiography performed 1 day after primary PCI. We divided patients into two groups according to the presence (n=25) or absence (n=328) of CTO in the non-infarct-related coronary artery, and compared the clinical outcome of patients between the two groups.

RESULTS The LVEF estimated by echocardiography after primary PCI was similar between patients with and without CTO (55.1±8.6% vs. 58.0±9.4%; p=0.33); however, CTO patients were significantly more likely to undergo intra-aortic balloon pumping (56.0% vs. 12.5%; p<0.001) during primary PCI, and 30-day mortality was significantly higher in CTO patients (12.0% vs. 0.9%; p<0.001). By multivariate analysis, cardiogenic shock at arrival was significantly correlated with 30-day mortality.

CONCLUSION In AMI patients with CTO, even if their LVEF was preserved after successful primary PCI, the short-term prognosis is poor as compared to that of AMI patients without CTO. The cause of such poor prognosis was strongly associated with initial cardiogenic shock at the time of arrival to the hospital.

TCTAP A-045
N-Terminal Pro-B-Type Natriuretic Peptide Concentration in Patients with Poor or Good Coronary Collaterals
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BACKGROUND N-terminal pro-B-type natriuretic peptide (NT-pro-BNP) provides prognostic information and the degree of left ventricular systolic dysfunction in patients with coronary artery disease. The correlation between NT-pro-BNP level and collateral formation in patients with chronic total occlusion (CTO) has not been reported.

METHODS 96 cases of pure single-vessel chronic total occlusion were studied. 60 age- and sex-matched patients who had normal coronary