

Impact of Percutaneous Coronary Intervention on 12-month Chronic Total Occlusion Outcomes in Patients with Limited Coronary Collateral Flow.

Background: Limited coronary collateral flow is known to have an adverse effect on clinical outcomes of coronary artery diseases. The impact of percutaneous coronary intervention (PCI) for chronic total occlusion (CTO) in pts with limited collaterals is not clear. We compared the 12-month clinical outcomes of pts treated by PCI with optimal medical therapy (OMT) for CTO lesions in pts with limited collaterals. Methods: A total of 166 consecutive CTO pts with coronary collateral flow grade <2 were divided into 2 groups; one group underwent PCI (PCI group; n=100) and the other group was treated with OMT (OMT group; n=66). Major clinical outcomes were compared between the two groups up to 12 months. Results: At baseline, the OMT group had a lower LVEF% and a higher prevalence of elderly, left main disease, multivessel disease, multivessel CTO, and LCX-CTO, whereas the PCI group had a higher prevalence of prior MI and prior PTCA. Clinical outcomes at 12 months showed higher incidence of non Q-wave MI in the OMT group (Table). After baseline adjustment by multivariate analysis, however, there was no difference between the 2 groups. Conclusions: In our study, mechanical revascularization by PCI for CTO lesions in pts with limited collaterals seems to have no definite benefit in reducing 12-month morbidity or mortality. Long-term follow up with larger study population will be necessary for further determination of the benefit and risks of interventional therapy in CTO pts.