

Impact of Multivessel Disease in Patients with Chronic Total Occlusion on Six-Month Angiographic and Two-Year Clinical Outcomes

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Background: Chronic total occlusion (CTO) intervention is still challenging because of the limited procedural success rate and higher recurrence. It is not clear whether the presence of multivessel disease (MVD) will negatively impact on angiographic and clinical outcomes following CTO intervention as compared with single vessel disease (SVD). **Methods:** A total of 238 consecutive patients (pts) underwent CTO intervention were divided into two groups according to the number of treated vessel (MVD with CTO: n=149 pts, SVD with CTO: n=89 pts). Six-month angiographic and twelve-month clinical outcomes were compared between the two groups. **Results:** The baseline clinical characteristics were balanced between the two groups except higher incidence of myocardial infarction (MI, 31.5 vs. 17.9 p=0.021) and a lower left ventricular ejection fraction (LVEF, $47.97 \pm 12.1\%$ vs. $52.75 \pm 9.3\%$, p=0.001) in the MVD group. The overall procedural success rate, procedural characteristics and procedure related complications including perforation and dissection were not different between the two groups. Angiographic outcomes at 6 months and major clinical outcomes up to 24 months were similar between the two groups except a trend toward higher incidence of total death and major adverse cardiac events (MACE) in the MVD group. **Conclusions:** Once the CTO intervention was successful, the presence of MVD in CTO patients did not negatively impact on 2-year major clinical outcomes.