

¹Korea University Guro Hospital

Se Yeon Choi¹, Seung-Woon Rha¹, Byoung Geol Choi¹, Sung Il Im¹, Sun Won Kim¹, Jin Oh Na¹, Seong Woo Han¹, Cheol Ung Choi¹, Hong Euy Lim¹, Jin Won Kim¹, Eung Ju Kim¹, Chang Gyu Park¹, Hong Seog Seo¹, Dong Joo Oh¹

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 angiographic and clinical outcomes may differ between patients (pts) with single vessel CTO (SV-CTO) and multi-vessel CTO (MV-CTO). **Methods:** A total of 238 consecutive pts underwent CTO intervention were divided according to the number of target CTO vessels (SV-CTO: n=220 pts, MV-CTO: n=18 pts). Six-month angiographic and 24-month clinical outcomes were compared between the two groups. **Results:** The baseline clinical characteristics were balanced between the two groups except that incidence of myocardial infarction (MI, 61.1 vs. 23.6%, p<0.001) and a lower left ventricular ejection fraction% (LVEF%, 42.0 ± 11.80 vs. 50.28 ± 11.15 p= 0.003) was higher in the MV-CTO group. The overall procedural success rate was lower in the MV-CTO group (77.7% vs. 94.0 % p=0.009). Procedural characteristics and procedure related complications including perforation and dissection were not different between the two groups. Once the CTO was successfully treated, the angiographic outcomes at 6 months and major clinical outcomes up to 24 months were similar between the two groups. **Conclusions:** Baseline characteristics were worse and the procedural success rate was lower in the MV-CTO group. However, once the CTO lesion was successfully recanalized, the safety profiles, complications, mid-term angiographic and clinical outcomes up to 24 months were similar between the two groups.