Results: Mean friction resistance (N) was significantly decreased with the new support system (0.84 ± 0.28 vs. 1.26 ± 0.31, n=18, p<0.01). Any unfavorable phenomenon such as device fracture was not observed during the support system use.

Conclusions: The new intervention support system could reduce friction resistance during device insertion. Therefore, the system has potential ability to contribute to make complex coronary intervention procedures such as those to heavily calcified lesions or chronic total occlusions easier.

TCT-448
Abstract Withdrawn

TCT-449
Short and Long Term Clinical Outcomes of Chronic Total Occlusion Treatment with a Latest Generation Drug Eluting Stent
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Background: Introduction of drug-eluting stents (DES), which have been demonstrated to cause less restenosis than bare-metal stents (BMS) in specific patient and lesion subsets, has raised hopes of improving long-term vessel patency after chronic total occlusion (CTO) recanalization. However, limited evidence of the benefit and safety of DES use in CTO is available. We aim to analyze the short and long term outcomes of patients with CTO treated with the latest generation drug eluting stent (DES) by pulling data from NOBORI 2 and eNOBORI registries.

Methods: NOBORI2 and eNOBORI are two large, prospective, single-arm, multi-center, registries that enrolled 3067 and 7750 patients respectively, out of which 97 and 302 had treated CTO. All adverse events were adjudicated by an independent clinical event committee in NOBORI 2, while adjudication in eNOBORI (including stent thrombosis) is ongoing. The primary endpoint was Target Lesion Failure (TLF), a composite of stent thrombosis up to 3 years, despite the multiple overlapping stents suggest that this stent is valuable treatment option for patients with CTO disease considered as candidates for PCI.

TCT-450
Improvement in LV systolic function with ischemia guided (fractional flow reserve) chronic total occlusion (CTO) intervention
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Background: To evaluate ischemia with FFR and LV function response to the myocardium supplied by a CTO in pts with LV systolic dysfunction (LVEF ≤0.50).

Methods: Pts referred for angiogram for angina on optimal medical therapy and LVEF ≤0.50 underwent FFR evaluation of CTO (after partial recanalization with a small 1.5 mm balloon) and underwent PCI of CTO.

Results: Ten CTO and 10 matched non-CTO pts with severe stenosis ≥70% were studied. Baseline characteristics were similar: age (60.9 ± 8.9yrs), sex(males/90%), HTN(90%), diabetes(45%), hyperlipidemia(80%), CRF(30%), bypass surgery(25%), h/o MI(50%) and Q waves on ECG(35%). LVEF at baseline was 35.7±10.6% in the CTO and 42.3±7.9 in the non-CTO pts, (p =0.04). Pre-PCI FFR were 0.46 ±0.17 in the CTO and 0.42±0.16 in the non-CTO groups (p =0.83) and; post-PCI FFR was similar (0.88±0.09, CTO group and 0.90±0.09 non-CTO group, p=0.57). At a mean follow up of 1.4 yrs, LV EF was significantly improved to 45.3±9.5% in the CTO group vs 35.7±10.6% at baseline (p=0.01), while there was a non-significant LV EF improvement in the non-CTO group (45.4±9.8% vs 42.5±7.9%, p=0.18) as shown in figure.

Conclusions: In pts with LV systolic dysfunction there is demonstrable ischemia (FFR<0.80) in the CTO territory, that is relieved after CTO PCI (FFR ≥0.80) with an improvement in the LV systolic function.

TCT-451
Application of the “Hybrid Approach” To Chronic Total Occlusion Interventions
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Background: The “hybrid approach” to chronic total occlusion (CTO) interventions advocates early and frequent change of the utilized strategy to maximize efficiency. The “hybrid approach” to CTO interventions: We prospectively recorded detailed procedural information (strategy change (range 2 -7) (Figure). The mean procedure time, fluoroscopy time, mean friction resistance (N) was significantly decreased with the new support system (0.84 ± 0.28 vs. 1.26 ± 0.31, n=18, p<0.01). Any unfavorable phenomenon such as device fracture was not observed during the support system use. The system has potential ability to contribute to make complex coronary intervention procedures such as those to heavily calcified lesions or chronic total occlusions easier.