

lower in the registry (2.56±2.20 vs. 3.47±1.89, p=0.003). At hospital discharge, registry patients experienced a 42% reduction in NYHA class III-IV symptoms. In-hospital mortality was numerically lower among registry patients (2.7% vs. 4.6, p=0.27). Need for blood transfusions were similar in registry and clinical trial patients (9.1% vs. 12.5%, p=0.21). There were no differences in the occurrence of other complications such as acute kidney failure, vascular injury or ventricular arrhythmias.

CONCLUSIONS USpella provides a real world and contemporary estimation of the type of procedures and outcomes of high-risk patients undergoing PCI supported by Impella 2.5. Despite the higher risk of registry patients, clinical outcomes appeared to be favorable and consistent compared with the randomized trial.

CATEGORIES CORONARY: Complex and Higher Risk Procedures for Indicated Patients (CHIP)

KEYWORDS High-risk PCI, Impella, Left ventricular assist device

TCT-21

Guidewire and Microcatheter Utilization for Antegrade wire escalation in Chronic Total Occlusion Percutaneous Coronary Intervention: Insights from a Contemporary Multicenter Registry

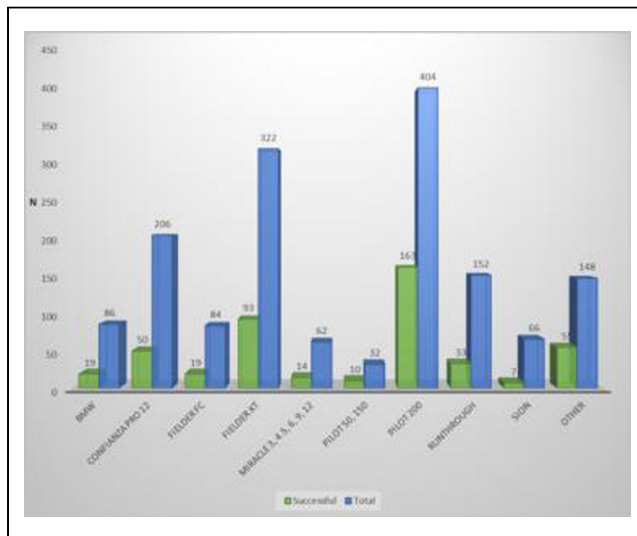
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BACKGROUND We sought to describe contemporary guidewire utilization for antegrade wire escalation during chronic total occlusion (CTO) percutaneous coronary intervention (PCI).

METHODS We examined guidewire and microcatheter utilization during antegrade wire escalation attempts among 1097 CTO PCIs performed at 13 experienced US centers between May 2012 and April 2015 using the hybrid approach.

RESULTS Mean age was 65 ± 9.8 years, 83.2% of the patients were men and 33.3% had prior coronary bypass graft surgery. Technical and procedural success was 90.6% and 87.6%, respectively. Antegrade wire escalation was used in 780 procedures (71.1%), and was the final successful crossing strategy in 463 procedures (59.3%). A total of 1630 guidewires (2.4 ± 1.4 per procedure) were used for antegrade wire escalation. The most frequently used guidewires were the Pilot 200 (Abbott Vascular, 24.7%), Fielder XT (Asahi Intecc, 19.7%), and the Confianza Pro 12 (Asahi Intecc, 12.6%) (Figure 1). The same guidewires were the ones that most commonly led to successful CTO crossing: Pilot 200 (35.2% of successful antegrade wire crossings), Fielder XT (20%) and Confianza Pro 12 (10.7%). A microcatheter or over-the-wire balloon was used in 73.8% of antegrade wire escalation cases, as follows: Corsair (Asahi-Intecc, 42.8%), Finecross (Terumo, 18.6%), over-the-wire balloon (14.2%), CrossBoss (Boston Scientific, 12.7%), and Venture (St Jude Medical, 3.3%).



CONCLUSIONS Our contemporary, multicenter CTO PCI registry demonstrates remarkable consistency in guidewire selection for antegrade wire escalation, with polymer-jacketed guidewires being used in most cases including most successfully crossed cases. Upfront use of the Pilot 200 guidewire might offer the best chance for successful guidewire crossing.

CATEGORIES CORONARY: Complex and Higher Risk Procedures for Indicated Patients (CHIP)

TCT-22

Patent and Occluded Saphenous Vein Grafts as Retrograde Conduits for Percutaneous Revascularization of Coronary Chronic Total Occlusions: The Quebec Experience

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BACKGROUND The prevalence of native coronary CTO following coronary artery bypass grafts (CABG) is high. At 10 years following CABG, half patients will have at least one saphenous vein graft (SVG) occluded and/or many SVGs will be diseased. Long-term outcome post SVG PCI is poor, with high occlusion rate. If symptomatic, these patients may be considered for a native coronary CTO PCI rather than SVG PCI. We examined the feasibility and outcomes of CTO PCI using a patent or occluded SVG as a retrograde conduit to the native CTO vessel.

METHODS Our preferred wire to cross an occluded SVG is Pilot 200 (Abbott Vascular, US) followed by a microcatheter (MC) (usually Corsair, Asahi Intecc, Japan), whereas standard workhorse wire can be used in patent but diseased SVGs or arterial graft. MC tip injection is performed to assess if the wire tracked the vein structure in case of an occluded SVG. Clips and other surgical landmarks are used to track the occluded graft with the wire. Once the MC is at the distal CTO cap, standard techniques to open CTO are employed. We assessed the proportion of patients treated with such technique from SVGs. We specifically reviewed the J-CTO score, the prevalence of occluded vs. patent graft, the type of graft crossed (SVG or arterial graft), technical success and management of the graft after successful PCI of the native CTO.

RESULTS From 03.2009 to 04.2015 431 CTO PCI cases were performed by a single operator (SR) or a team of 2 operators (SR and CMN). Of these, 156 (36.2%) were done in post-CABG patients. In the post-CABG cohort, an antegrade approach was used in 68 (43.6%) and a retrograde in 88 (56.4%) of cases. In the retrograde approach, septal collateral channels (CCs) were used in 26 (29.5%), epicardial in 34 (38.6%) and SVGs in 28 (31.8%) of cases. Technical success of CTO revascularization in post-CABG patients (J-CTO score 2.51±0.1) was 91%. In the sub-group treated from an SVG, mean J-CTO score was 3.04±0.19. The CTO location was in the right coronary artery in 43%, left circumflex in 43%, left anterior descending in 7% and in the left main in 7%. When using an SVG, success was achieved in 27 cases (96.4%). A total of 15 SVGs (53.6%) were occluded before the retrograde attempt, and the oldest occlusion was 4-years old. Most common native coronary CTO recanalization