TCT-319 Use of Limited Antegrade Subintimal Tracking Technique in Chronic Total Occlusion Percutaneous Coronary Intervention

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There has been an increased utilization of LAAOC in women. Although women are noted to be generally older with a higher CHADS2VASc score, they are significantly more likely to get readmitted to hospital.

**CATEGORIES STRUCTURAL:** Left Atrial Appendage Exclusion

**TCT-319**

Use of Limited Antegrade Subintimal Tracking Technique in Chronic Total Occlusion Percutaneous Coronary Intervention

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**BACKGROUND** There are limited data on the limited antegrade subintimal tracking (LAST) crossing technique for chronic total occlusion (CTO) percutaneous coronary intervention (PCI).

**METHODS** We analyzed the frequency of use and outcomes of LAST among 2,003 CTO PCI procedures performed with antegrade dissection and re-entry (ADR) in the PROGRESS-CTO Registry between 2012 and 2021 at 39 centers.

**RESULTS** LAST was used in 144 cases (7.2%), primary LAST in 113 (5.6%), and secondary LAST in 31 cases (1.5%). The Stingray system
was used in 905 cases (45.2%), subintimal and re-entry (STAR) in 333 cases (16.6%), and contrast-guided STAR in 29 cases (1.4%). The mean patient age was 64.2 ± 10 years, 86% were men, and 34.9% had prior coronary artery bypass graft surgery. Cases in which LAST was used were less complex with a lower J-CTO score (2.50 ± 1.32 vs. 2.95 ± 1.10, \( P < 0.001 \)). There was no difference in technical (75.0% vs. 78.4%, \( P = 0.337 \)) and procedural success (72.2% vs. 75.5%, \( P = 0.384 \)) and major cardiac adverse events (MACEs) (2.08% vs. 3.55%, \( P = 0.352 \)) between LAST and non-LAST cases. However, cases in which the LAST technique was used required less procedure and fluoroscopy time (Figure 1A). A primary LAST technique was associated with higher technical and procedural success rates and a similar MACE rate compared with a secondary LAST technique (Figure 1B).

**CONCLUSION** LAST is used in 7.2% of ADR CTO PCI cases and is associated with similar technical and procedural success rates and major complication rates but lower procedural and fluoroscopy time compared with ADR cases that did not use LAST.

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

**TCT-320**

Pharmacokinetic and Pharmacodynamic Profile of PL-ASA, a Novel Phospholipid-Aspirin Complex Liquid Formulation, Compared to Enteric-Coated Aspirin at an 81-mg Dose – Results From a Prospective, Randomized, Crossover Study

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**BACKGROUND** Immediate-release (IR) aspirin (ASA) is associated with a risk of mucosal damage in the upper gastrointestinal (GI) tract. Enteric-coated (EC) ASA was designed to reduce GI discomfort and bleeding and is the established standard of care in secondary prevention. However, there is evidence that EC-ASA results in greater variability in absorption and antiplatelet effect than IR-ASA. PL-ASA, a novel Food and Drug Administration-approved, liquid-filled phospholipid ASA capsule, is an IR formulation designed to release aspirin in the duodenum, thus limiting GI toxicity, while still providing fast and consistent antiplatelet absorption and reliable platelet inhibition.

**METHODS** The current study is a randomized, open-label, crossover study assessing the comparative pharmacodynamic (PD) and pharmacokinetic (PK) profiles following treatment with a single 81-mg dose of PL-ASA versus EC-ASA under fasting conditions in subjects (n = 36) between 50 and 75 years of age. Subjects are randomly assigned at a 1:1 ratio to either PL-ASA followed by EC-ASA or EC-ASA followed by PL-ASA with a 14-day washout period between the 2 study drugs. Following each study drug administration, blood draws for PK and PD, including thromboxane B2 (TxB2), and platelet aggregation assessments are performed at multiple time points up to 24 hours. PK parameters of acetylsalicylic acid and salicylic acid will be compared. PD assessments will include the comparison between PL-ASA and EC aspirin of the time to 99% inhibition of serum TxB2, incidence of >99% inhibition of TxB2, and platelet aggregation following arachidonic acid and collagen stimul.

**RESULTS** The study is currently recruiting, and results will be presented at the meeting.

**CONCLUSION** The current study will provide data on the comparative PK and PD profiles of PL-ASA, a novel IR-ASA capsule formulation, versus commonly used EC-ASA at an 81-mg dose.

**CATEGORIES CORONARY:** Pharmacology/Pharmacotherapy

**TCT-321**

Abstract Withdrawn

**TCT-322**

Prevention of Radial Artery Occlusion After Transradial Access Using Nitroglycerin (Patens Trial)

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**BACKGROUND** The use of transradial access (TRA) for coronary catheterization has increased over the years because of the reduced rates of vascular complications and easier postprocedural management. Radial artery occlusion (RAO) remains the Achilles heel of TRA. Intra-arterial nitroglycerin could result in a significant reduction of RAO. The vasodilation may enhance antegrade flow in the artery that reduces stasis-induced thrombosis, but it could also minimize endothelial trauma when used early in the procedure. The main objective of this study is to evaluate whether nitroglycerin at the beginning or end of TRA may preserve the patency of the artery.

**METHODS** We conducted a prospective, multicenter, randomized, 2 × 2 factorial, placebo-controlled, 2-blinded study and enrolled patients submitted to catheterization by TRA. Patients received either 500 μg nitroglycerin or placebo given intra-arterially through the sheath at 2 moments: early, after sheath insertion, and late, at the end of the radial procedure. All patients received at least 5,000 UI heparin, sheaths were removed immediately after the catheterization, and a radial pneumatic wristband was applied intending patent or minimum pressure hemostasis. The primary outcome was the incidence of RAO, verified by Doppler evaluation within the first 24 hours, and every patient with confirmed RAO was further evaluated 30 days later.

**RESULTS** A total of 1,894 patients were enrolled, with a mean age of 61.7 ± 10.3 years. The majority (61.6%) were male, and 36.5% had diabetes. The clinical indication was ACS in 47.9%. RAO occurred in 49 patients (2.6%) by Doppler evaluation. Fifteen patients (30.6%) showed re-establishment of flow at 30-day Doppler assessment. Nitroglycerin, as compared with placebo, did not reduce the risk of RAO in either of the 2 moments used (early: 2.4% vs 2.8%, \( P = 0.65 \)) or late: 2.8% vs 2.4%, \( P = 0.65 \), respectively). In the multivariate analysis, the size of the radial artery, obtaining access with a single puncture, operator inexperience, and the presence of spasm were associated with RAO.

**CONCLUSION** In the present study, the use of nitroglycerin is not associated with a reduced incidence of RAO regardless of the administration time.

**CATEGORIES OTHER:** Vascular Access: Coronary

**TCT-323**

Is There a Difference in the Types of Complex High-Risk but Indicated Percutaneous Coronary Interventions (CHIP) Undertaken and Their Outcomes Among Different Racial Groups? Insights From a National Cohort

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**BACKGROUND** In contemporary practice, complex high-risk but indicated percutaneous coronary intervention (CHIP) is increasingly common. Data on race-based differences in the nature of CHIP and their clinical outcomes in patients with stable coronary artery disease (CAD) are limited.

**METHODS** We obtained data on percutaneous coronary intervention (PCI) for stable CAD performed in England and Wales from January 1, 2006, to December 31, 2017, from the British Cardiovascular Intervention Society (BCIS) registry. The collected data were retrospectively analyzed and stratified by race. Multivariate regression analysis was performed to assess the relationship between CHIP, race, and outcomes.