11-1-2021

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

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Recommended Citation

Karacsonyi J, Alaswad K, Karmpaliotis D, Jaffer FA, Choi J, Tsiafoutis I, Kandzari D, Poommipanit P, Khatri J, Elbarouni B, Riley R, Gorgulu S, Kostantinis S, Simsek B, ElGuindy A, Abi-Rafeh N, Goktekin O, Ungi I, Gutierrez A, Avula V, and Brilakis E. TCT-319 Use of Limited Antegrade Subintimal Tracking Technique in Chronic Total Occlusion Percutaneous Coronary Intervention. J Am Coll Cardiol 2021; 78(19):B130-B131.

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10.1, and 69.0 ± 9.5 years, respectively ($P < 0.0001$), and the majority were men (72.1%, 76.7%, and 83.4%, respectively; $P < 0.0001$) (Table 1). The prevalence of medically treated diabetes was 30% (n = 494) with important differences in geographic distribution (280/816 [34.3%] NA, 142/650 [21.9%] EU, and 72/163 [44.2%] Japan; $P < 0.0001$). Overall procedural success (final in-stent stenosis <30% without in-hospital major adverse cardiac events) was achieved in 1,556 of 1,611 (96.6%), including 785 of 805 (97.5%) in NA, 614 of 643 (95.5%) in EU, and 157 of 163 (96.3%) in Japan ($P = 0.17$). The overall target lesion failure rate at 12 months was 84 of 1,629 (5.2%), with slight but nonsignificant differences between NA, EU, and Japan (4.7%, 6.5%, and 2.5%, respectively; $P = 0.08$), with similar trends in the Supreme DES group (NA 24/549 [4.4%], EU 29/429 [6.8%], and Japan 4/108 [3.7%]; $P = 0.20$). Cardiac death at 12 months occurred in 0.4%, 0.2%, and 0.0%, respectively ($P = 0.79$); target vessel-related myocardial infarction occurred in 2.2%, 4.7%, and 3.7%, respectively ($P = 0.10$); and clinically driven target lesion vascularization was required in 2.1%, 3.1%, and 0%, respectively ($P = 0.15$).

Characteristic/ Outcome	North America (n = 816)	Europe (n = 650)	Japan (n = 163)	Total (N = 1,629)	*P* Value
Age, years	64.1 ± 9.7	63.5 ± 10.1	69.0 ± 9.5	64.3 ± 10	<0.0001
DM	34.3% (280)	21.9% (142)	44.2% (72)	30.3% (494)	<0.0001
Procedural success	97.5% (785)	95.5% (614)	96.3% (157)	96.6% (1156)	0.17
TLF	4.7% (38)	6.5% (42)	2.5% (4)	5.2% (84)	0.08
Supreme DES group					
TLF	4.4% (24)	6.8% (29)	3.7% (4)	5.3% (57)	0.20
Cardiac death	0.4% (2)	0.2% (1)	0.0% (0)	0.3% (3)	0.79
TV-MI	2.2% (12)	4.7% (20)	3.7% (4)	3.3% (26)	0.10
Clinically driven TLR	2.1% (11)	3.1% (13)	0% (0)	2.3% (24)	0.15

CONCLUSION Despite regional differences in patient risk characteristics, clinical outcomes comparing Supreme DES and DP-DES in the PIONEER III trial were not different in NA, EU, and Japan, confirming the worldwide validity of the results achieved with the Supreme DES in this trial.

CATEGORIES CORONARY: Stents: Drug-Eluting

TCT-317

Abstract Withdrawn

TCT-318

Sex Differences in Outcomes and Readmissions After Left Atrial Appendage Occlusion

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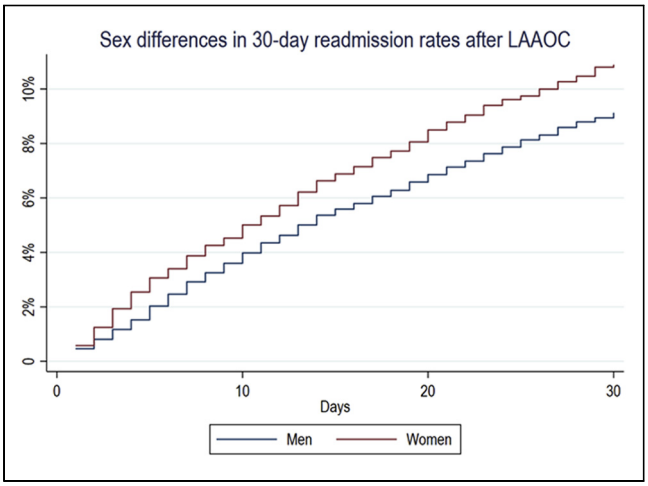
BACKGROUND Left atrial appendage occlusion (LAAOC) is increasingly being performed in patients with atrial fibrillation who are not candidates for long-term anticoagulation. Women and men may present with different baseline characteristics, which may influence outcomes including readmission rates. We sought to address this knowledge gap.

METHODS This is an observational study using the all-payer National Readmission Database in the United States from 2015 to 2018. Using appropriate International Classification of Diseases-10th Revision-Clinical Modification codes, we identified all adults (age ≥18 years) who underwent LAAOC. The primary outcome was readmission rates in men compared with women. We also evaluated the sex-based trends in the use of LAAOC. Predictors of 30-day readmission were explored using multivariate Cox regression analysis adjusting for all independent predictors found by univariate screening.

RESULTS A total of 29,949 adult index hospitalizations (17,532 men and 12,417 women) for LAAOC were included in this study. The women were generally older 76.6 ± 7.7 versus 75.7 ± 8.1 ($P < 0.01$) and generally had a higher mean CHADS2VASc score (7.5 vs 6.4, $P < 0.01$). There has been a significant increase in the utilization of LAAOC in women over the course of the study from 39.1% in 2015 to 43.4% in 2018 ($P < 0.01$ for the trend). The average 30-day readmission rate was 10.4% for women compared with 8.7% for men. Female sex was an independent predictor of readmission (hazard ratio: 1.15 [95% CI: 1.04-1.28], $P = 0.009$) (Figure 1). The in-hospital bleeding complications requiring transfusion during index admission were much higher in women compared with men (2.2% vs 1.5%, $P < 0.01$). The mean length of stay and total cost for index admission were significantly higher in women compared with men (1.59 vs 1.45 days and US $25,985 vs US $26,608, respectively).



CONCLUSION 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 PCIs performed with antegrade dissection and reentry (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 tracking 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 complete drug absorption and potent and reliable cyclooxygenase-1 inhibition. Previous studies have compared the 325-mg dose of PL-ASA with IR-ASA and EC-ASA, and the current study is the first to investigate the 81-mg dose, which is most commonly used in clinical practice.

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 stimuli.

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.