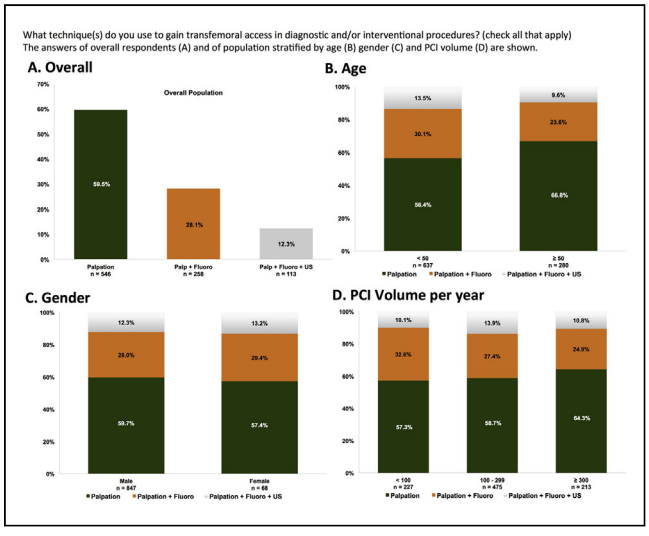
influence of operator experience and PCI volume on adherence to transfemoral access best practices has not been studied. This international survey aimed to examine the influence of operator experience on TFA practices and fill important gaps to improve the quality of care in the cardiac catheterization laboratory.

METHODS A survey instrument was developed and distributed via email from professional societies to interventional cardiologists worldwide between March and December 2016.

RESULTS A total of 988 physicians from 88 countries responded to the survey. TFA is the preferred approach for patients with cardiogenic shock, left main or bifurcation PCI, and procedures with mechanical circulatory support. Older (<50 years: 56.4%; ≥50 years: 66.8%, $p < 0.0039$) and high PCI volume operators (<100 PCI: 57.3%; 100-299 PCI: 58.7%; ≥300 PCI: 64.3%, $p < 0.134$) utilize palpation alone without imaging (fluoroscopy or ultrasound) for TFA (Figure). Most respondents do not use micropuncture needle to gain arterial access regardless of age or experience. Older operators (<50 years: 71.5%; ≥50 years: 64.4%, $p < 0.04$) and high PCI volume operators (<100 PCI: 67.9%; 100-299 PCI: 72.6%; ≥300 PCI: 64.1%, $p < 0.072$) are less likely to perform a femoral angiogram (FA) during PCI. Of those performing FA, the majority (67%) does so at the end of the procedure.

CONCLUSION Despite best-practice guideline recommendations, older and high PCI volume interventional cardiologists prefer not to use imaging (fluoroscopy or ultrasound) for femoral access or to perform femoral angiography during TF PCI. Future studies should investigate whether the lack of adoption of best practices in TFA is associated with adverse events.



CRT-200.26

Does Micropuncture Technique Really Help Reduce Vascular Complications?

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BACKGROUND Femoral arterial access (FAA) in Coronary Angiography (CAG), and Percutaneous Coronary Interventional (PCI) is associated with 2-6% vascular complication (VC) rate. FEMORIS randomized study comparing 21-gauge Micropuncture technique (MPT) with 18-gauge failed to demonstrate statistical superiority in reducing VCs. We initiated a quality improvement project in our cardiac catheterization laboratory to reduce the FA access site complications via utilization of MPT.

METHODS We utilized MPT on all of our FAA non-emergent cases starting in September 2016 in addition to collecting data since April 2016 retrospectively. Anatomic localization of FA and fluoroscopic marking of femoral head were utilized in all cases. VCs were defined as any hematoma>3cm, major bleeding requiring PRBCs or Hb drop > 2gm, retroperitoneal bleed, pseudoaneurysm, AV fistula, arterial thrombosis, distal embolism, dissection, transient limb ischemia, and access site infection. Chi-Square and Fisher's exact test with p<0.05, as well as multiple logistic regression analysis were utilized.

RESULTS A total of 647 patients (M 357, F 290; MPT 333) were included in the analysis. MPT as compared to regular 18-gauge needle access did not demonstrate a reduction in VC rate (2.4% vs. 2.2%; p=1.0). On multivariate analysis, the only variable that was associated with a reduction in VCs is the utilization of VCDs, when adjusted for parameters listed in Table 1. Manual compression (MC) for hemostasis is associated with 4.1 times the odds of VCs as compared to VCD use (95% CI 1.111-15.574).

CONCLUSION Utilization of MPT did not contribute to statistically significant reduction in VC rate. The only factor that correlated with reduction in VC rate is the utilization of VCDs. Further large randomized studies are required to demonstrate benefit if any, in utilizing MPT on a routine basis.

Contributors to Vascular Complications

Multivariate Variables	Odds Ratio	95% Wald CI_Lower limit	95% Wald CI_Upperlimit
Race, Age, Gender, BMI, Sheath size, CAG vs. PCI, h/o HTN, HLD, DM, CKD, Smoking, CAD, PCI, CABG, PAD, intra/peri-procedural use of Aspirin, Clopidogrel, Brilinta, Heparin, Bivalirudin (Not Significant)	Not Significant		
18-gauge vs. Micropuncture technique	1.18	0.37	3.71
ManualHemostasis vs. Vascular Closure Device	4.15	1.11	15.57

CRT-200.27

Are We Closing The Gender Gap In 2017? Vascular Complications Following Common Femoral Arterial Access: Then and Now

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BACKGROUND Femoral arterial access (FAA) in diagnostic (DA) and interventional (PCI) coronary and peripheral procedures is associated with 2-6% vascular complication (VC) rate. FEMORIS randomized study comparing 21-gauge Micropuncture technique (MPT) with 18-gauge failed to demonstrate statistical superiority in reducing VCs.

METHODS Two thousand six hundred seventeen patients who underwent DA and PCI via FAA were retrospectively separated into Period 1 (2005 to 2008; 1970 patients; M 1045; F 925) and Period 2 (2016-2017; 647 patients; M 357; F 290; MPT in 333). FAA was preceded by anatomic FA localization during Period 1 vs. additional fluoroscopic marking of femoral head during Period 2. VCs were defined as hematoma>3cm, major bleeding requiring PRBCs or Hb drop > 2gm, retroperitoneal bleed, pseudoaneurysm, AV fistula, arterial thrombosis, distal embolism, dissection, transient limb ischemia, and access site infection. Chi-Square and Fisher's exact test with p<0.05, as well as multiple logistic regression analysis were utilized for analysis.

RESULTS The rate of VCs remain unchanged from Period 1 to 2 (2.44% vs. 2.32%, p=1.0). An elevated rate of VCs experienced by women of Period 1 (F 3.68% vs. M 1.34%, p<0.05) is no longer noted in Period 2(F 2.07% vs. M 2.52%, p=0.79). Multivariate analysis limited to Period 1 has revealed OR for VCs of 4.623 (95% CI: 2.14-9.97) in women, 0.1 (95% CI: 0.03-0.34) for DA vs. PCI, and 3.7 (95% CI: 1.7-7.6) for MC vs. VCD. Age, Race, BMI, h/o HTN, HLD, DM, Smoking, CABG, PCI, PAD, intra/peri-procedural use of Heparin, Bivalirudin, Clopidogrel, did not contribute to VCs. Multivariate analysis limited to Period 2 has revealed that the only variable that contributed to VCs was utilization of MC over VCDs (OR 4.15; 95% CI: 1.11-15.57). Age, Race, Gender, BMI, h/o HTN, HLD, DM, CKD, Smoking, CAD, PCI, CABG, PAD, PCI vs DA, intra/peri-procedural use of Heparin,