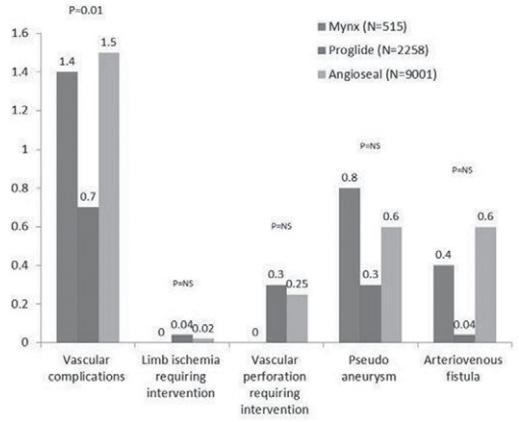
	Mynx N=515	Proglide N=2258	Angioseal N=9001	P
Age (year)	65.0±12.0	64.3±13.7	63.3±56.7	0.53
Male (%)	340(66)	1589(70.4)	6030(67.1)	0.007
Diabetes (%)	192(37.4)	752(33.6)	2985(33.4)	0.17
Peripheral vascular disease (%)	69(13.6)	292(13.0)	1098(89.1)	0.47
Renal failure (%)	73(14.4)	270(12.0)	1103(12.3)	0.34
Acute myocardial infarction (%)	63(12.3)	305(13.5)	1412(15.7)	0.006
Intra-aortic balloon pump (%)	5(1.0)	30(1.3)	215(2.4)	0.001



Conclusion: Vascular complications were lowest after PCI following hemostasis with suture closure device (Proglide) as compared to collagen (Angioseal) or sealant (Mynx) closure.

TCT-537

Influence Of Vascular Closure Devices On Femoral Access Site Related Bleeding In ST-Elevation Myocardial Infarction

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Background: There is conflicting data on whether vascular closure devices (VCD) decrease the rates of access site related bleeding (ASB). Moreover, the effects of VCDs on the risk of ASB are ill-defined for STEMI patients.
Methods: We analyzed vascular ASBs in 1762 consecutive patients presenting with suspected STEMI, undergoing primary PCI between 1-1-2003 and 31-8-2008 in a large tertiary PCI centre. Patients were excluded in case of: radial access route, > 1 access sites, shock and treatment with IABP or other LVAD (final cohort n = 1320). ASB was defined as hematoma > 5 cm, aneurysm spurium, retroperitoneal hematoma and oozing with a Hb decrease of ≥ 3 g/dL. The occurrence of ASB within 30 days and the use of VCD were determined from chart review. Cox regression analysis was used to calculate the hazard ratios for risk of ASB for suture-based (Perclose) and collagen-based VCDs (Angioseal) with manual compression as reference, adjusting for predictors of ASB. Patients were censored if a second procedure (angiography or PCI) was performed within 30 days. A second model with identical covariables was used to determine the effects of the two types of VCD on ASB.
Results: In 961 (72.8%) patients a VCD was deployed. Of these, 209 (21.7%) received a collagen based VCD (Angioseal). The rates of ASB were 7.0% (n = 24) for manual compression, 5.7% (n = 41) after Perclose and 6.8 (n = 14) after treatment with angioseal. In a multivariable Cox regression, the use of a Perclose resulted in a hazard ratio 0.93 for the occurrence of ASB (HR 0.92, p = 0.78). The use of Angioseal was associated with a HR 1.18 (p = 0.64). In patients treated with a VCD, there was no difference in the risk of ASB between patients treated with Perclose (HR 0.87, p = 0.67) and Angioseal (reference).
Conclusion: No reduction in the risk of ASB after treatment with a VCD was observed in STEMI patients, when compared with manual compression. In those patients treated with a VCD, no difference was observed between collagen-based (Angioseal) or suture-based VCDs (Perclose).

TCT-538

Routine Use of the Transradial Approach in Primary Percutaneous Coronary Intervention: Procedural Aspects and Outcomes in 2209 Patients Treated in a Single High-Volume Center

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Background: The transradial approach (TRA) has shown to reduce access site complications in patients undergoing primary percutaneous coronary intervention (PPCI). However, due to the small number and selection of patients included in previous studies, TRA has not become the preferred access site for PPCI so far. We assessed the feasibility of routine TRA and procedural success rates in a large unselected cohort of patients undergoing PPCI.
Methods: We retrospectively analyzed all PPCI procedures performed at our institution between January 2001 and December 2008. Cardiogenic shock and rescue PCI after failed thrombolysis were the only a priori exclusion criteria. We examined access site cross-over rates and procedural success rates defined as TIMI flow grade 3 or an increase of 2 grades and ≤30% stenosis, and their trends over time. In addition, we analyzed trends in procedural times.
Results: A total of 2209 TRA-PPCI were performed during the study period. In 84 cases (3.8%) access site cross-over was needed. Cross-over rates decreased from 5.9% in 2001-2002 to 1.5% in 2007-2008 (p=0.001). Procedural success rate was 94.1%, which remained stable over the years. Despite an increased complexity of PPCI (more non-LAD infarct related arteries, thrombus aspiration, and multivessel PCI), total procedural duration decreased from 38 min (IQR 28-50) in 2001-2002 to 24 min (18-33) in 2007-2008, p<0.001 for trend.
Conclusion: Systematic TRA in PPCI yields low access site cross-over, high procedural success rates and excellent procedural performances. It thereby can represent the primary access site in the vast majority of STEMI patients.

TCT-539

Same Wrist Intervention via The Cubital (ulnar) artery in case of radial puncture failure for percutaneous cardiac catheterization or intervention: the multicenter prospective SWITCH registry

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Background: The radial approach is safer than the femoral for percutaneous coronary procedures. However its feasibility is lower, mainly for technical issues, often related to failure to puncture/cannulate the radial artery. The ulnar approach is a valid alternative to radial. We aimed to test the incidence, feasibility and safety of a direct homolateral ulnar approach in case of radial puncture/cannulation failure.
Methods: Five operators collected prospectively their 1-year activity (diagnostic and interventional) with focus on entry site. Entry site choice was left to operators' discretion. In case of failed radial puncture/cannulation, an attempt to cannulate the homolateral ulnar artery was mandated, if ulnar pulse was present. All patients in whom this attempt was performed were followed until discharge.
Results: Out of 2403 procedures (1271 interventions), the successful entry site was radial in 1599 (66.5%), femoral in 744 (31.0%), ulnar in 50 (2.1%) and brachial in 9 (0.4%); 1 procedure was a failure. Radial failure occurred in 117 patients (6.9%). In 42 (35.9% of all radial failures), a homolateral ulnar approach was attempted. A successful cannulation of the ulnar artery occurred in 36 patients (85.7%) with further performance of the complete procedure. Concerning local complications, 1 radial pseudo-aneurysm (treated with additional compression) occurred, while no cases of hand ischemia were reported.
Conclusion: In this prospective multicenter registry, in case of radial puncture/cannulation failure, switching directly to the homolateral ulnar artery for percutaneous coronary procedures is highly feasible and it appears to be safe, without cases of symptomatic hand ischemia in this series.

TCT-540

Resource Utilization for Propensity Matched Radial and Femoral Catheterization and Intervention

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Background: Transitioning to radial artery (RA) use is appealing, but has historically been associated with operator dependent variables such as higher contrast use and longer procedure time. Whether newer technology and experience minimizes the disparities in resource utilization, however, is uncertain. Accordingly, we sought to compare cath lab resource utilization in patients undergoing routine cardiac catheterization (CATH) and intervention (PCI) during a transition from routine femoral artery (FA) access to RA access as the preferred access site.
Methods: 4,177 consecutive procedures were attempted at a single center (Wake Forest Baptist Medical Center) between January 2009 and November 2010 (2,661 FA; 1,504 RA). Emergent, STEMI, and CABG patients were excluded. Resource utilization in the cath lab was assessed for propensity score matched CATH and PCI cases.
Results: Patients were well matched for baseline clinical characteristics. CATH and PCI were performed via RA in 90.3% of attempted patients; with 9.7% requiring switching to FA (included in RA group). In lab resource utilization for CATH only, CATH and PCI at same setting and for PCI alone are shown in the table.