

	Trans-radial	Trans-femoral	Hazard ratio	p
VAS_baseline	49.81	50.57	1.02	0.895
VAS_3h	72.26	67.52	1.15	0.348
EQ-5D_mobility_3h	2.22	2.74	1.93	0.008
EQ-5D_self-care_3h	1.85	2.43	1.48	0.003
EQ-5D_pain_3h	1.37	1.7	1.29	0.034
VAS_4d	72.11	69	2.09	0.603
EQ-5D_mobility_4d	1.26	1.22	1.47	0.805
EQ-5D_self-care_4d	1.21	1.11	2.74	0.502
EQ-5D_pain_4d	1.42	1.5	1.39	0.673
MacNew_emotional	5.12	4.19	1.12	0.019
MacNew_total	5.27	4.51	1.02	0.088

TCT-422

Large 22 to 24Fr femoral vein hemostasis with a subcutaneous stitch or a double Perclose closure is effective and safe

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Background: Various methods of hemostasis have been developed for large 22 to 24Fr femoral vein accesses for structural heart disease. Manual compression (MC) is uncomfortable whilst a subcutaneous stitch (SCS), which too is uncomfortable to remove, and a double Perclose (DPC; Abbott Vascular Devices, CA) closure enables immediate hemostasis. This study is to determine the effectiveness and safety of these methods.

Methods: 155 patients (mean age 70±17years; 60(38%) female) underwent 158 valvular therapies with the MitraClip device [n=147, 93%] (Abbott Vascular, Santa Clara, CA), Melody [n= 2, 1%] (Medtronic Inc., Minneapolis, MN) or Edwards SAPIEN [n = 9, 6%] (Edwards Lifesciences LLC, Irvine, CA) valves. There were 24(16%) SCS and 99(62%) DPC, and 35(22%) MC.

Results: There were 8(5%) access site complications (ASC): 4/35(11%) in MC (2 hematomas ≥1cm but <5cm, 1 hematoma ≥5cm requiring 2U of blood, 1 arterial-venous fistula), 1/24(4%) in SCS (1 bleeding site requiring 1U of blood), and 3/99(3%) in DPC (1 femoral vein thrombosis, 1 hematoma ≥1cm but <5cm, 1 hematoma ≥5 cm requiring 2U of blood). The frequency of ASC between methods was not significantly different (MC vs. SCS p=0.33, MC vs. DPC p=0.06, SCS vs. DPC p=0.78). Median length of stay was 1.0±1.1 days and was similar to patients that developed ASC (p=0.09) and between groups (p=0.23). Protamine (median dose 30±18mg) use did not influence the frequency of ASC (2/8 protamine use with ASC vs 6/8 without ASC, p=0.29). Post procedure hemoglobin and hematocrit drop was significant (1.4±1.0g/dL and 4.2±3.5%; both p<0.01) and by comparison, this decline was significantly less for SCS (0.7±1.2g/dL and 1.9±3.9%; both p<0.01). DPC required additional strategies (like a SCS) to attain immediate hemostasis more than SCS (26/99 (26%) vs. 1/24 (4%), p=0.02). Overall there were no in-hospital deaths, ASC related deaths and wound infections at follow-up (mean 20±18months).

Conclusions: Femoral vein closure for large 22 to 24Fr accesses, with either the SCS or DPC method enables immediate hemostasis and reduces patient discomfort, without compromising safety.

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Profile, Safety, And 1-Year Outcome Of Patients With Same-Day Discharge After Percutaneous Coronary Intervention Using Different Vascular Access: A High-Volume Single-Center Experience.

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Background: Same-day discharge after elective percutaneous coronary interventions (PCI) allows a decrease in length of hospital stay, waiting list and costs with increased patient satisfaction, but data regarding clinical features of the population with potential benefit and safety are limited.

Methods: A consecutive group of patients who underwent elective PCI and considered suitable for same-day discharge over a period of 4 years were enrolled. Unstable patients with left main disease, left ventricular ejection fraction < 45%, non-use of dual antiplatelet therapy, use of oral anticoagulants or inability to reach the PCI-center within 60 minutes were excluded. Patients were examined 6 hours post-PCI and discharged if there were no procedural complications. Clinical follow-up was carried out in all patients after 7 days from discharge, and at 1-month and 1-year.

Results: After 981 potentially ambulatory-PCI procedures, 417 patients (42.5%) were discharged as day cases. PCI procedures were performed by transradial (89%), transfemoral (9.4%), or transcubital (1.6%) approach. Mean age was 65±10 years (80% male),

50% active smokers, and 27% diabetics. Most patients (62%) lived in the city area (<50 km away from the PCI-hospital). Procedural success was achieved in 100% of patients. In over 85% of patients one or two lesions in one or two vessels were treated. The mean procedure time, mean post-PCI observation time, and mean length-of-stay after PCI were 58±22 min, 6.56±1.24 hrs, and 10.35±1.41 hrs, respectively. During the procedure, vascular complications related to the radial route were found in 9 (2.1%) patients, and crossover from transradial to transfemoral was needed in 6 (1.4%) of patients. At 7 days follow-up, 2 patients developed mild size hematoma on radial access site and 1 patient on femoral access site, without any other vascular complications or major bleeding. There were no deaths or myocardial infarction within 7 days of discharge. The 1-year mortality rate was very low (0.2%, 1 patient).

Conclusions: Same-day discharge after elective PCI is feasible and safe with a remarkable 1-year outcome. Its application and benefits could be extended to a broader population of patients.

TCT-424

Trends in access site choice for PCI and influence on mortality - Observational data from the British Cardiovascular Intervention Society PCI database.

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Background: In the UK, there has been a significant change in choice of access site for PCI driven by the desire to reduce access site complications. This has become increasingly important with the shift to more acute PCI with the use of more potent anti-thrombotic agents. In view of the the rapid uptake of transradial access in the UK we sought to assess changes in outcome using nationally collected data from the British Cardiovascular Intervention Society database.

Methods: This study includes data collected by the British Cardiovascular Intervention Society under the auspices of the Central Cardiac Audit Database. We performed a retrospective analysis of the BCIS database between January 2006 and December 2010. The data was split into 2 cohorts based on access site: either radial or femoral (mixed access site use and other access sites were excluded from the analysis).

Results: Of the 370,238 procedures recorded, 223,476 (60.4%) used only transfemoral access (TFA) and 124,616 (33.7%) used only transradial access (TRA). Data was missing or mixed access was used in 22,146 (6%) of procedures. Between 2006 and 2010 TRA for PCI increased from 17.1% to 50.8%. Over the same period, PCI for ACS increased from 47% to 61% of procedures. 30 day mortality was 1.9% in the TFA group and 1% in the TRA group (p < 0.001). The incidence of patients presenting with cardiogenic shock was significantly higher in the TFA group (2.1% vs 0.9%, p < 0.001). With shocked and intra-aortic balloon pump (IABP) treated patients excluded, TRA remained independently associated with a reduction in 30 day mortality (HR 0.65, CI 0.60-0.70: p<0.0001) in a multivariate analysis.

Conclusions: The majority of PCI in the UK is now undertaken using radial access. In this large observational study, there is an association between TRA and lower 30 day mortality. The association persists even when shock and IABP treated patients are excluded.

TCT-425

Repeated Transradial Catheterization: Feasibility, Efficacy and Safety

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Background: Transradial approach is used as an alternative to transfemoral approach for coronary angiography (CA) and primary coronary intervention (PCI). Transradial approach results in less access site bleeding, immediate ambulation after the procedure, reduced length of stay and costs, less pain and improved patient comfort. However, it has been suggested that transradial approach can lead to increased incidence of radial artery occlusion, not allowing for repeated catheterizations from the same artery. There is limited data on the feasibility, safety and efficacy of repeated transradial (rTR) catheterization from the same artery. We evaluated the incidence of failure and major complications during rTR catheterization.

Methods: We performed 3,857 catheterizations with various indications and access sites at the American Heart Institute, in Nicosia-Cyprus, between Jan 2006 and Dec 2009. In our center, we established TR catheterization as the routine method for elective, urgent and emergency procedures (primary or rescue PCI). Baseline characteristics (e.g. sociodemographics, underlying disease, smoking, prior CABG), procedural success rates and major complications were recorded.

Results: Right rTR catheterization was attempted in 92 patients. Repeated access to the right radial site was not possible in only 2 patients, due to poor pulse (n=1), and inability to advance the wire (n=1). In 84 patients right rTR was successfully performed twice, and in 6 patients 3 times. No major access site complications were noted in any of the above procedures.