

## POSTER SESSION

1004

### Vascular Access for Percutaneous Coronary Intervention (PCI) and Anticoagulation for PCI

Sunday, March 07, 2004, 9:00 a.m.-11:00 a.m.  
 Morial Convention Center, Hall G  
 Presentation Hour: 9:00 a.m.-10:00 a.m.

1004-47

#### A Randomized Comparison of Transradial and Transfemoral Approaches for Coronary Angiography and Percutaneous Transluminal Coronary Angioplasty in Octogenarians: Final Results of the OCTO-PLUS Study

Yves Louvard, Rémi Sabatier, Hakim Benamer, Philippe Garot, David Hildick-Smith, Christophe Loubeyre, Thierry Lefèvre, Gilles Grollier, Martial Hamon, Institut Cardiovasculaire Paris Sud, Massy, France

**Background:** The rate of access site complications after coronary angiography (Angio) and/or PCI has been shown to be higher in older patients. This prospective randomized study was carried out to assess the potential advantages of Transradial (TRA) approach in this setting.

**Methods:** Patients (pts) undergoing Angio or PCI were randomized to either transfemoral approach (TFA) or TRA in 5 centers using TRA in routine. The primary end-point was the rate of access site complications leading to increased hospital stay.

**Results:** Study population included 371 pts, mean age  $82.8 \pm 2.9$  years, 53.4 % male, presenting with unstable angina in 35.6% of cases or AMI in 10.5%. 188 pts were randomized to TRA (174 angio followed by 87 PCI, and 9 PCI), 183 to TFA (176 angio followed by 74 PCI and 12 PCI). 51.9% of PCI pts received a femoral closure device. Main results by intention to treat are summarized below:

	Radial	P value	Femoral
Cross-over (%)	9.0	ns	8.2
Angio duration (min)	$18.5 \pm 10.5$	0.069	$16.4 \pm 11.0$
X-ray duration (min)	$6.0 \pm 4.4$	0.01	$4.4 \pm 3.4$
PCI success (%)	95.3	ns	93.7
PCI duration (min)	$33.9 \pm 21.6$	ns	$34.1 \pm 23.1$
PCI X-ray duration (min)	$11.5 \pm 9.5$	ns	$10.8 \pm 9.9$
Primary endpoint*	1.6	0.03	6.6
Hematoma > 3 cm (%)	2.2	0.0025	11.4

\* per protocol: 0.5% vs 7.6%, p= 0.001

**Conclusion:** Combined end-point of all approach-related vascular complications leading to prolonged hospital stay is significantly lower in octogenarians randomized to transradial approach for coronary angiography and/or PCI compared to transfemoral approach. As in younger patients, for coronary angiography, X-Ray exposure time is slightly but significantly longer in the transradial group. There is no difference in X-Ray exposure time for PCI, procedural time, contrast medium volume and equipment use in Angio and PCI.

1004-48

#### Randomized Trial of Radial Versus Femoral Access for Primary and Rescue Angioplasty

Warren J. Cantor, Geoff Puley, Madhu Natarajan, Vlad Dzavik, Mina Madan, Anne Fry, Nury Pirani, Hahn Hoe Kim, James Velianou, Bradley H. Strauss, Robert J. Chisholm, St. Michael's Hospital, Toronto, ON, Canada

**Background:** Transradial access for percutaneous coronary intervention (PCI) results in fewer bleeding and vascular complications, earlier ambulation and improved patient comfort. Limited data exists for radial access in acute myocardial infarction (MI), where reperfusion must occur quickly.

**Methods:** In a multicentre pilot trial, 50 patients with MI requiring either primary or rescue PCI were randomized to radial or femoral access. Patients in cardiogenic shock were excluded. All patients received aspirin and heparin. All operators had previously performed at least 100 transradial cases. Procedure times were prospectively measured. All patients underwent ultrasound-Doppler of the access site, and were followed to 30 days.

**Results:** To date, procedural data, in-hospital events and Doppler results are available for 44 patients (25 radial, 19 femoral). Thrombolysis was used in 68% of cases and glycoprotein IIb/IIIa inhibitors were used in 91%. Cross-over from radial to femoral access was required in one case. PCI was performed in 41 patients, with stenting in 39. One procedural failure occurred in the radial group due to inability to cross the occlusion. The time from local anaesthesia to first balloon inflation was 32 (26, 38) min for radial and 25 (22, 30) min for femoral access (p=0.04). There were no significant differences in contrast use or fluoroscopy time. No patients required intra-aortic balloon pump. No patients experienced major bleeding or required transfusions. By Doppler there were two asymptomatic radial occlusions and two pseudoaneurysms (one in each group). There were no strokes, reinfarctions, vascular surgeries, bypass or repeat PCI. One patient in the femoral group died two days after PCI. Outcomes at 30 days and quality of life data will be presented.

**Conclusions:** Transradial access for primary or rescue PCI is feasible with high success rates similar to femoral access. Although radial access was associated with a longer time

to reperfusion, the difference was small and likely not clinically significant. In patients without shock, major bleeding and vascular complications are infrequent with either access site despite the high use of thrombolysis and GP IIb/IIIa inhibitors.

1004-49

#### The Risk of Bleeding in Renal Failure Patients Undergoing Glycoprotein IIb/IIIa Receptor Inhibition: A Report From the American College of Cardiology-National Cardiovascular Data Registry

Hursh S. Naik, Peter Y. M. Hui, Rupsa R. Yee, Richard E. Shaw, American College of Cardiology National Cardiovascular Data Registry (ACC-NCDR), Bethesda, MD

**Background:** Renal dysfunction is present in a substantial number of patients undergoing percutaneous coronary intervention (PCI). Few studies have investigated the effect of Glycoprotein (Gp) IIb/IIIa inhibition in these patients. The purpose of this study was to evaluate bleeding complications with Gp IIb/IIIa inhibitors in patients with renal failure.

**Methods:** Between January 1, 2001 and March 31, 2003 data from 278,105 consecutive PCI procedures were submitted from 304 institutions to the American College of Cardiology National Cardiovascular Data Registry (ACC-NCDR). Vascular bleeding events with and without IIb/IIIa inhibitors were compared in patients with renal dysfunction using chi-square analysis.

**Results:** Out of 278,105 patients in the ACC-NCDR registry, 12,059 patients had renal failure. Renal failure was defined as a documented history of renal failure that was treated with medication, low protein diet, or dialysis by a physician. In the absence of Gp IIb/IIIa inhibition, patients with renal failure had more bleeding complications than those without renal failure (2.8% vs. 1.9% p-value <0.0001). However, in the renal failure group there was no significant increase in bleeding complications with or without the addition of Gp IIb/IIIa inhibitors (2.4% vs. 2.8% p-value = ns).

**Conclusion:** The presence of renal dysfunction during PCI predisposes patients to bleeding complications. This risk is not significantly increased with the addition of Gp IIb/IIIa inhibitors. Therefore, Gp IIb/IIIa inhibition in the setting of renal dysfunction, does not appear to be an independent risk factor for bleeding.

1004-50

#### Percutaneous Ulnar Artery Approach for Coronary Diagnostic and Therapeutic Interventions

Eduardo Aptekar, Patrick Dupouy, Mourad Chabane-Chaouch, Youssef Elhajj, Jean-Marc Pernès, Clinique Les Fontaines, Melun, France, Hôpital Privé d'Antony, Antony, France

**Background:** While the transradial approach is now a well established alternative to femoral approach, the use of the ulnar artery has rarely been intended for percutaneous coronary interventions (PCI).

**Aim of the study:** to ascertain the feasibility and security of the transulnar approach for PCI.

**Methods:** 143 consecutive patients referred for PCI were screened, and were eligible if a good ulnar pulse was present and if the Allen test was positive. The right ulnar artery was punctured with a 20-gauge x 2" entry needle, into which a straight 0.025" guide wire was inserted (Radifocus Introducer II, Terumo). A 4 F introducer was placed on the wire. Sodium heparin (3,000 IU) and verapamil (2.5 mg) were injected. Coronary arteries and left ventricle were catheterized with 4 F JL4 and JR4 or AL2, and pig-tail catheters. Angioplasty was made using 5 or 6 F guiding catheters. Manual compression was done after retrieval of the introducer. An Echo Doppler of the wrist vessels was done  $10 \pm 7$  days after procedure.

**Results:** from 143 patients screened, ulnar access was intended in 107 pts (73%), successful in 96 pts (91%). Time and number of punctions were  $118 \pm 135$  sec and 1,6 (maximal 5).

Procedures	Number	Success rate	Procedural time	X-ray time	X-ray dose
		%	(min)	(min)	(Gycm2)
Coronarography	71	100	$13,2 \pm 5,2$	$7,1 \pm 3,5$	$35 \pm 27$
Coronarography + PTCA	20	100	$41 \pm 26$	$19,4 \pm 14$	$126 \pm 70$
DelayedPTCA	5	100	$25 \pm 16$	$13 \pm 7$	$74 \pm 38$

There were no procedural complications. Echo Doppler was obtained in 91 pts (94%). Access site complications were: 0 occlusion, 1 pseudo-aneurysm, 3 slight hematomas.

**Conclusion:** ulnar artery approach is a feasible and safe alternative to radial approach for percutaneous coronary interventions.

1004-51

#### Assessment of the Feasibility, Safety, and Success of Transradial Access for Percutaneous Coronary Intervention: A Report From the American College of Cardiology-National Cardiovascular Data Registry

Ahmed S. Ahmed, Mohammed Murtaza, Timothy Catchings, Richard Webel, Ba Lin, Richard Shaw, Greg C. Flaker, University of Missouri-Columbia, Columbia, MO, The American College of Cardiology, Bethesda, MD

**Background:** Previous studies have shown that transradial access (TRA) appears to be safe, with an acceptable success rate, but these studies were limited by small sample size. The purpose of this study was to evaluate the feasibility, safety and success rate of the TRA for percutaneous coronary intervention (PCI) in contemporary practice. **Methods:** Between January 1, 2001 and March 31, 2003, data on 278,105 PCI procedures were submitted from 304 institutions to the American College of Cardiology National Cardiovascular Data Registry (ACC-NCDR). Of these, valid data on access site entry were available for 275,290 PCI procedures. TRA was used in 3,237 (1.2%) of these proce-