

Aim: to compare coronary angiography performed using radial artery approach with El Gamal or Judkins catheter.

Methods: we compared 1000 patients who underwent coronary angiography, 500 examinations were performed using El Gamal technique and 500 using Judkins technique.

Results: Mean time of examination (minutes) after radial artery puncture: 5.7 minutes with the El Gamal and 6.8 minutes with the Judkins technique. Mean time of fluoroscopy (minutes): 3.8 minutes with the El Gamal and 3.9 minutes with the Judkins. Mean contrast medium (ml): 55 ml with the El Gamal, 62 ml with the Judkins. With the El Gamal technique the coronary angiography was performed using only one catheter in 74% of the patients, using two catheters in 10% of the patients and three or more catheters in 16% of the patients. With Judkins technique the coronary angiography was performed using two catheters in 84% of the patients, in 10% of the patients we used three or more catheters. Technical problems were: radial artery's spasm in 9% of the patients with the Judkins technique (2% with the El Gamal). Difficulty in crossing vessels' tortuosity in 9% of the patients with the Judkins' technique (6% solved using the El Gamal catheter), only 1% of the patient with the El Gamal. No complications occurred in both groups.

Conclusions: In our study this technique with only one El Gamal catheter is effective in 74% of the cases. It reduces the time of examination significantly and limits the time of fluoroscopy. It allows the saving of the catheters used and it's very useful in case of extreme vessels' tortuosity.

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Feasibility and Safety of Repeat Radial Artery Route for Coronary Procedures

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Objective: As there is growing interest in US for trans-radial angioplasty we want to see the feasibility, safety, success and complications of repeat radial artery route for coronary procedures.

Methods and Results: We retrospectively analyzed the data of patients who undergone repeat coronary through same radial artery route from Jan 2012 to Dec 2012 by two experienced operators from our institute. 137 patients undergone repeat same radial artery route for 161 coronary procedures with mean age of 54.2 ± 9.7 yrs and 21 females. Average procedure time for CAG was 8' 45" and for PCI 19' 36" (excluding CTOs). Average amount of contrast used for CAG was 45.2±15.6 ml and for PCI was 72±36.4ml. Maximum number of times in a pt transradial route used were 5. As this is nonrandomized study the same pt might have undergone CAG and PTCA either transradially or transfemorally over a period of time during the coronary procedures. Coronary procedures done through transradial route in a given pt were CAG+PTCA, CAG+CAG, PTCA+PTCA and MULTIPLE (>2 punctures) PROCEDURES. The no of pt, the mean of duration (days) between two transradial routes (minimum & maximum days) and success of procedure, in CAG+PTCA group of pts were 86, 168.3 and 100%, in CAG+CAG group of pts were 16, 667.2 and 100%, in PTCA+PTCA group of pts were 17, 751.9 and in multiple procedures group of pts 18, 328.1 respectively. Acute failures and/or complications concerned with transradial route occurred in 8 (10.9%) pts. No hematomas or infection or aneurysms at puncture site. In one pt (1.37%) we could not puncture radial artery, in one pt (1.37%) after arterial puncture wire passage was difficult, in two pts radial spasm, but relieved with vasodilators & completed the PCI transradially (2.7% to nil) and in one pt (1.37%) guide support was not proper. Asymptomatic acute pulse occlusion in 3, but reappearance of pulse at 15 days in two of them (4.1% to 1.37%). Total failures were 4.1% (3 pts) and complications were 1.37% (one pt). So, overall failures and/or complications were 5.4% (4 pts). Failures and/or complications related to PCI occurred in 7 (9.59%) pts. Failures are mainly not able to cross the lesion (3 CTOs - 4.1%). In one CTO (1.37%) balloon could not be negotiated and in one calcific lesion (1.37%) stent could not be deployed. One pt (1.37%) developed mild CIN which improved with hydration. One pt (1.37%) developed acute stent thrombosis, repeat successful PCI done transradially.

Conclusion: Repeated transradial coronary procedures are safe with minimal complication and excellent success rates.

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ABSTRACT WITHDRAWN

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12 Months Clinical Outcomes of Transradial Coronary Intervention: Comparison of the Right and Left Radial Artery Approach

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Background: The radial artery (RA) approach for percutaneous coronary intervention (PCI) has several advantages such as reduction of bleeding risk, improvement of patients' convenience, and immediate ambulation as compared with the femoral artery approach for PCI. In RA approach for PCI, there are some anatomical and technical differences between right and left RA approach. The aim of this study is to evaluate the impact of the choice of the right or left RA approach on 12 months clinical outcomes in the patients undergoing transradial intervention.

Methods: A total of 1,653 consecutive patients undergoing PCI via radial were enrolled between November 2004 to October 2010 in Korean Transradial Intervention Registry. The patients were divided into two groups such as right approach group (n=792 pts) and left approach group (n=861 pts). To adjust potential confounders, propensity score matched analysis was performed using the logistic regression model (C-statistics: 0.726). After propensity score match (PSM), total of 1,100 pts were enrolled for this analysis (MVS: n=550 pts, SVS: n=550 pts).

Results: After PSM, the baseline clinical and angiographic characteristics were balanced between two groups. However, contrast volume during procedure were larger in right approach group (259.3 ± 119.6 cc vs. 227.0 ± 90.7 cc, p-value <0.001), procedure time (49.2 ± 30.4 min vs. 55.4 ± 28.7 min, p-value=0.003) were longer in left approach group, and fluoroscopic time (22.5 ± 28.0 min vs. 17.1 ± 12.6 min) were longer in right approach group. After PSM, procedural and in-hospital complications were similar between two groups. After PSM, cumulative clinical outcomes up to 12 months including mortality, recurrent myocardial infarction (MI), revascularization, and stent thrombosis were similar between two groups.

Conclusions: In this study, the procedural efficacy including procedural time and contract volume increased in right artery approach. However, 12 months cumulative clinical outcomes were similar between two groups.

Table1. Clinical outcomes up to 12 months between right and left approach after PSM

Variable, N (%)	Right radial (n=550 pts)	Left radial (n=550 pts)	p Value
Mortality	21 (3.8)	26 (4.7)	0.456
Cardiac death	15 (2.7)	16 (2.9)	0.855
Recurrent Myocardial infarction	3 (0.5)	3 (0.5)	ns
Repeat Percutaneous Coronary Intervention (PCI)	25 (4.5)	27 (4.9)	0.776
Target lesion revascularization (TLR)	17 (3.0)	23 (4.1)	0.334
Target vessel revascularization (TVR)	25 (4.5)	27 (4.9)	0.776
Stent Thrombosis	5 (0.9)	0 (0.0)	0.062
MACE(Mortality, repeat PCI, MI)	44 (8.0)	53 (9.6)	0.339
MACCE (Mortality, repeat PCI, MI, CVA)	49 (8.9)	53 (9.6)	0.678