TCT-276

Radial Artery Patency In Japanese and Non-japanese Patients After Transradial Coronary Angiography and Intervention With 6 French Slender or Standard 5 French Sheaths. A Substudy From RAP and BEAT (Radial Artery Patency and Bleeding, Efficacy, Adverse evenT) Randomised Multicenter Trial.

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BACKGROUND In patients undergoing transradial (TR) access, current standard of care and outcome may differ between countries and continents. The purpose of this study was to compare the rate of radial artery occlusion (RAO) in Japanese and non-Japanese patients after TR coronary angiography and/or interventions with the 6 French(Fr) Glidesheath Slender (GSS6Fr, Terumo, Japan) or a standard 5Fr sheath.

METHODS In the Radial Artery Patency and Bleeding, Efficacy, Adverse evenT (RAP and BEAT) trial, patients undergoing TR coronary angiography and/or interventions were randomized to GSS6Fr or standard 5Fr Glidesheath (GS5Fr, Terumo, Japan). Out of this study population, 1087 were Japanese patients and 751 non-Japanese patients. The primary endpoint was the occurrence of RAO at discharge.

RESULTS In the overall population, non-inferiority of GSS6Fr against GS5Fr for the incidence of RAO was not met (3.47% vs 1.74%, Pnon inferiority=0.150). The incidence of RAO was 3.6% in Japanese patients and 1.2% in non-Japanese patients (p=0.002). In Japanese patients, RAO rates were 5% with GSS6F and 2.2% with GS5Fr (Pnon inferiority=0.585). In non-Japanese patients, RAO rates were 1.3% with GSS6F and 1.1% with GS5Fr (Pnon inferiority=0.002). The mean hemostasis time was significantly longer in Japanese patients (378±253 vs 159±136 min, p<0.001) and more Japanese patients had a hemostasis time of more than 6 hours (16.2% vs 4.9%, OR 3.73, 95% CI 2.58-5.39%, p<0.0001). In non-Japanese patients, there was no difference in the mean hemostasis time between GSS6Fr and GS5Fr (161.2±143.1 vs 157.3 ± 128.1 min, p=0.693) whereas Japanese patients experienced longer mean hemostasis time with GSS6Fr (398.9 ± 272.6 vs 356.6 ± 229.8 min, p=0.0058). Japanese patients were also associated with significantly more access-site bleeding (OR 1.72, 95% CI 1.33-2.22%, p<0.0001), pain during the procedure (OR 3.82, 95% CI 3.04-4.8%, p<0.0001) and procedural failure (OR 5.6, 95% CI 1.28-24.4%, p=0.013).

CONCLUSION In this large multicenter trial, use of the GSS6Fr was associated with a higher rate of RAO than a standard 5Fr sheath in Japanese patients but not in non-Japanese patients. Whether improvement in post-procedural care and reduced hemostasis time could impact the incidence of RAO in Japanese patients should be further assessed.

CATEGORIES OTHER: Vascular Access

TCT-277

Optical coherence tomography imaging assessment of radial artery injury after transradial coronary intervention

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BACKGROUND Transradial coronary intervention (TRI) introduces a trauma to the radial artery (RA), possibly influencing quality as a bypass conduit if subsequently used. We sought to determine the acute and chronic effects of TRI on the RA by optical coherence tomography (OCT).

METHODS After TRI completion, 35 RAs in 35 patients were examined. The sheath was pulled back 2 cm distal to the puncture site, and OCT was done. The following data were colected: mean diameter, luminal area, area of intima and media layer, intima and media thickening, ITI (intima/media area ratio), IMR (max intimal/max media thickening), intimal injury, dissection, thrombi, plaques, vessel stenosis, spasm. The acute injuries and intimal thickening were compared between first-TRI RAs (group 1) and repeat-TRI (group 2).

RESULTS Mean age was 60±12 years, 85% male, 49% smokers, 60% hypertensive, 34% dyslipemic, 17% previous IHD and 46% had previous radial catheterization. 100% right radial 6F. Catheterization was diagnostic in 60% and 40% therapeutic. Mean cannulated time was 39±19 min. The mean number of diagnostic catheters used was 1.8±0.7/1.2±0.4 therapeutics. Terumo hydrophilic wire was required in 3%, sheathless catheter in 6%. On the EVO pain scale the mean was 4.3±1.8 points. Midazolam/fentanyl was given in 25% of cases. Intimal tears were observed in 18% RAs and were more frequent in the proximal than in the distal RA. Medial dissections were uncommon (6.5% RAs). The frequency of acute injury was similar between groups. Intima/medial area (0,28±0,11 vs 0,35±0,15; p=0.03), the máximum intimal thickness/medial thickness ratio (0,37±0,17 vs 0,54±0,26; p=0.01), and percent narrowing were all significantly greater in repeat-TRI RAs in the proximal RA.

CONCLUSION Optical coherence tomography is a safe and usefull technique to evaluate acute and chronic effects of transradial coronary intervention on the radial artery. There are significant acute injuries and chronic intimal thickening of RA after TRI, mainly in the proximal segment. Further study should evaluate the impact of these effects when TRI RAs are subsequently used as conduits, on long-term graft patency and on clinical outcomes after bypass surgery.

CATEGORIES CORONARY: Complications

TCT-278

Abstract Withdrawn

LOW FLOW AND LOW GRADIENT AS AND TAVR

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TCT-279

Baseline and dobutamine stress hemodynamic physiology of the stenotic aortic valve before and after transcatheter valve implantation

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BACKGROUND Although symptoms from aortic stenosis (AS) arise during exertion, physiologic assessment almost always takes place at rest - a conceptual discordance.

METHODS The relationship between transvalvular pressure gradient (DP) and transvalvular flow (Q) fundamentally describes stenosis physiology. We developed a novel “FFR of the aortic valve”, the unitless aortic/LV average pressure ratio during systolic ejection at peak stress. We recruited patients undergoing routine TAVI and some with moderate AS. During graded dobutamine infusions before and after TAVI, 2 pressure wires continuously measured DP while a PA catheter regularly assessed thermodilution cardiac output.

RESULTS 20 subjects underwent assessment. DP versus Q did not display a consistent relationship. Neither linear (median R2 0.16) nor