TCT-269
RAS Registry, Real world incidence of Spasm in Trans radial Intervention
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Background: To report the incidence and predictors of moderate/severe radial artery spasm (RAS) in patients undergoing cardiac percutaneous interventions through a transradial approach (TRA) in center with TRA expertise. Data regarding the actual rate of clinically meaningful RAS are limited due to difference in study designs and operator expertise.

Methods: The RAS registry, an international (14 centers from Argentina, Chile, India, Indonesia, Macedonia, The Netherlands and United States of America) registry that included 1868 patients undergoing TRA cardiovascular procedures (63.5% diagnostic and 36.5% therapeutic) All selected centers used TRA as default strategy in the catheterization laboratory. Throughout 2012, each center included all consecutive TRA cases (during a two-month period) into a dedicated database covering clinical characteristics as well as procedural topics related to TRA patterns and RAS occurrence.

Results: The incidence of moderate/severe RAS was 2.7%. Only 0.7% of patients required repeat (8 to transfemoral and 5 to contralateral TRA). Patients with moderately/severe spasm were more frequently females, had a history of dyslipidemia, received more often a 7F sheath and more puncture attempts than patients without spasm. By multivariate analysis, the need for more than one attempt and the use of 7F sheath were independent predictors of the development of moderate/severe RAS.

Conclusions: The incidence of moderate/severe RAS is low in centers with a default transradial policy. Its development appears to be strongly related to the numbers of puncture attempts and the use of large sheaths.

TCT-270
Non-Cocktail Strategy for Transradial Procedures. A Sub-Analysis of an International Multicenter Registry
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Background: Radial artery spasm (RAS) is the most common complication during transradial procedures (TRP). Different spasmolytic drugs are used alone or in combination to avoid this complication. Radial hydrophilic sheaths offer less traumatic vascular access, and dedicated transradial catheters help avoid the use of larger French catheters and multiple exchanges, commonly associated with RAS. All these improvements, added to an ample learning curve in TRP, transformed a RAS into a less frequent complication. Because there is not enough evidence to support the non-use of spasmolytic drugs for TRP in daily practice, known as non-cocktail strategy, we assessed the hypothesis that the use of dedicated transradial devices by highly experienced operators makes spasmolytic cocktails unnecessary.

Methods: Throughout 2012 a multicenter transradial registry (RAS Registry) was created including prospectively and consecutively all TRP (diagnostic and therapeutic) in 14 highly experienced hospitals in 7 countries. We sub-analyzed the incidence of RAS in those patients who had received one or more spasmolytic drugs (group 1) compared to those without any spasmolytic drug (non-cocktail strategy) (group 2). Incidence of RAS was classified as mild (minimal local pain), moderate (significant local pain with possibility of moving the catheter to complete the procedure), and severe (cross-over to another access due to local pain during catheter movements compelling operator to stop the procedure or catheter trapping that does not allow proper handling).

Results: A total of 1,926 patients were analyzed. 1,552 (80.6%) belonged to group 1 and 374 (19.4%) to group 2. There were no statistical differences in patient and procedural characteristics between the two groups. RAS (mild/moderate/severe) incidence was: group 1: 10.9% and group 2: 9.9% (p = 0.64) and RAS (severe only) incidence was: group 1: 0.83% and group 2: 1.06% (p = 0.22) in the radial and the femoral group respectively. Moreover, in-hospital stay (1-0.5 vs 1-0.20 days, p = 0.04) was slightly higher following femoral approach. A temporary wire was placed in 10% of femoral patients. No in-hospital death was observed.

Conclusions: This study shows that the radial artery approach with the 7.5F SGC is at least as safe and effective as the conventional femoral approach for performing HSRA facilitated PCI.

TCT-271
Use of the sheathless guide catheter for transradial approach in primary percutaneous coronary intervention for acute ST-segment elevation myocardial infarction
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Background: Transradial approach (TRA) is effective treatment of primary percutaneous coronary intervention (PCI) for acute ST-segment elevation myocardial infarction (STEMI). Its safety and effectiveness are comparable to the transfemoral approach in PCI. We routinely conduct PCI via TRA with sheathless guide catheter for patients with STEMI. Using the sheathless guide catheter makes it possible to perform PCI without an introducer sheath. The sheathless catheter has a larger lumen without increasing an external diameter, as compared with conventional guide catheter. Due to this advantage, use of the sheathless catheter may contribute to further expanding the type of cases performed PCI via TRA. We evaluated the safety and effectiveness of use of sheathless catheter for TRA in PCI for STEMI.

Methods: We conducted PCI in 635 patients presenting STEMI between September 2010 and May 2013. We excluded 94 patients from this study due to use of conventional guide catheter (n = 16), transfemoral approach (n = 78). We analyzed data of the other 541 patients to evaluate safety and effectiveness of TRA with sheathless catheters. Primary endpoints of this study comprised crossover rates to another vascular access site, and acute procedural success rates. Secondary endpoints were total procedure duration, fluoroscopy times and contrast use. Acute procedural success was defined as a thrombolysis in myocardial infarction (TIMI) flow grade 3 or an improvement of the TIMI flow of 2 grades and 30% or less stenosis in the culprit lesion at the end of the procedure.