Results: Access site cross over was needed in 1 patient (0.002%), and conversion from sheathless guiding catheter to conventional guiding catheter in 1 patient (0.002%). Acute procedural success rate was 95.9%. The median duration of the procedures was 50min (IQR 41-65). The median time of fluoroscopy was 16.5min(IQR 12.7-23.6). The median contrast media use was 136ml (IQR 110-160). Guiding catheter-induced coronary artery dissection occurred in 1 patient.

Conclusions: Routine use of the Sheathless guide catheter for TRA in PCI for STEMI is feasible with a low crossover rate and a high rate of procedural success.

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Comparative Effectiveness of the Different Arterial Approaches "Transbrachial, Transradial and Transfemoral" in Percutaneous Coronary Interventions:

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Background: Up to our knowledge, there’s no data investigating the three different approaches (Transbrachial, Transradial and Transfemoral (TFA) for PCI. Coping with our daily needs for diversity of tools and approaches we explore our extensive experiences with the different PCI accesses.

Methods: This retrospective observational single center trial investigated 4955 CAD patients undergoing PCI. The study was conducted at Heart Hospital cardiac death, MI, stroke, major access site hematoma and/or bleeding and/or efficacy endpoints (Access and procedure success/time, contrast volume, cross over rate and access site complications). The 7 year study period, our results showed that both TBA and TRA associated with higher procedural success compared with TFA (p<0.001) with no significant difference in access success and time. Both TBA and TBA groups have hypotonic fluoroscopy time (p=0.001). Regarding the safety endpoints, our results showed that TFA patients have higher rate of MACE and In-Hospital cardiac death compared with TBA and TRA patients (p<0.008 and 0.01 for MACE and cardiac death respectively). Such difference is not encountered between TBA and TBA or TFA groups.

Results: Over the 7 year study period, our results showed that both TBA and TRA associated with higher procedural success compared with TFA. (p<0.001) with no significant difference in access success and time. Both TBA and TBA groups have hypotonic fluoroscopy time (p=0.001). Regarding the safety endpoints, our results showed that TFA patients have higher rate of MACE and In-Hospital cardiac death compared with TBA and TRA patients (p<0.008 and 0.01 for MACE and cardiac death respectively). Such difference is not encountered between TBA and TBA or TFA groups. However, there was no significant difference in MI, stroke, major access site hematoma and/or bleeding and/or efficacy endpoints (Access and procedure success/time, contrast volume, cross over rate and access site complications).

Conclusions: Based on the previous data, transbrachial approach for PCI could be a good alternative for the standard care approaches with considerable safety and efficacy.

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Patient Characteristics that Deter use of a Bleeding Avoidance Strategy during PCI

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Background: Use of bleeding avoidance strategies (BAS) such as transradial access, bivalirudin, and femoral closure devices have been shown to lower bleeding events after PCI but used most often in those at lowest risk of bleeding. Patient characteristics that deter use of BAS in higher risk patients for bleeding are not clearly established.

Methods: Patients undergoing PCI at four University of Pittsburgh Medical Center academic hospitals were enrolled in a hospital-based registry and followed prospectively beginning in October 2011. Bleeding events and bleeding risk score (BRS) were defined by NCDR criteria and definitions. Low risk of bleeding defined as score<13 and high risk of bleeding as score≥13.

Results: Among 2178 consecutive PCI patients (66.7% for acute coronary syndrome), 978 patients had a calculated BRS of <13 and 1200 patients ≥13. BAS use more likely in the low risk group (91.1 vs 83.0%, p=0.0001). Specific strategy used in the low and high-risk groups were femoral access closure only in 23.5 vs 28.2% (p<0.01), respectively. BAS was used only in 21.6 vs 23.7% in transradial access in 4.1 vs 3.8% (p=0.68), and a combination of BAS in 41.9 vs 30% (p=0.0001). Among the high risk group, logistic regression was used to determine the independent risk factors associated with use of BAS (Figure 1).

Conclusions: Utilization of a BAS has been increasingly advocated for especially in high-risk patients for bleeding. However, recognizing deterrents to utilization allows for understanding if use is even feasible and further studies are necessary to study the safety and efficacy of BAS in higher risk patients.