21st International Conference on Clinical and Experimental Cardiology

November 06-07, 2017 | Las Vegas, USA

Clinical factors impacting access site in patients presenting with ST elevation myocardial infarction

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Background: Despite, numerous publications showing improved outcomes in transradial (TR) access over transfemoral (TF) access in ST elevation myocardial infarction (STEMI) percutaneous coronary intervention (PCI), clinical factors including age, body mass index (BMI), hemodynamics, bradyarrhythmias may impact management decisions in cath lab thus are important to take into consideration during initial evaluation as access site choice for each STEMI patient should be individualized for best overall outcome.

Objective: The objective of this study was to identify clinical factors that influence TR vs TF access site choice in STEMI patients undergoing angiography and PCI.

Methods: This is a single-center retrospective study of consecutive STEMI patients undergoing angiography and PCI between 2008-2012. 321 patients were enrolled. 294 patients underwent PCI via TF approach and 27 patients underwent PCI via TR approach.

Results: In logistic regression model, patient weight (HR 1.012–1.042, p<0.001) and body mass index (BMI) (HR 1.059-1.173, p<0.001) were the only significant factors favoring TR over TF approach in STEMI PCI. Other initial presenting factors such as age, gender, heart rate, and hypotension did not influence access site choice.

Conclusions: Current study suggests that STEMI patients with higher BMI, who are at increased risk for bleeding complications, are more likely to undergo PCI via TR over TF approach. Interestingly, the obesity paradox suggests that higher BMI is cardioprotective in acute coronary syndrome. The association among access site, BMI and mortality rate in STEMI PCI should be further investigated to delineate factors which result in better outcomes in STEMI patients.

Biography

Howard Lan is a Senior Cardiology Fellow at Loma Linda University Medical Center and will continue his training in interventional cardiology at UCSF Fresno in 2018. He is passionate in the field of STEMI research with goals to identify factors that result in improved outcome in this patient population. He hopes to translate his research work into clinical practice in the future to better help patients who present with STEMI. He is also involved in Heart Failure Research and has found an association between cognitive impairment and higher mortality rate. By identifying heart failure patients who are at higher risks for poor outcome, the goal is to intervene early to improve quality of life and to improve overall survival.

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