Radial Intervention in Patients with Acute Coronary Syndromes - Results from ACSIS PCI 2010

Fefer, Paul[1]; Matetzky, Shlomi[1]; Kornowski, Ran[2]; Danenberg, Haim[3]; Gottlieb, Shmuel[4]; Bubyr, Liudmila[5]; Zahger, Doron[6]; Meerkin, David[7]; Cafri, Carlos[6]; Atar, Shaul[8]; Segev, Amit[1]
[1]Sheba Medical Center, Heart Center, Ramat Gan, Israel; [2]Rabin Medical Center, Cardiology, Petach Tikva, Israel; [3]Hadassah Hebrew University, Cardiology, Jerusalem, Israel; [4]Bikur Chloim Hospital, Cardiology, Jerusalem, Israel; [5]Sheba Medical Center, Center for Heart Attack Prevention, Ramat Gan, Israel; [6]Soroka Medical Center, Cardiology, Beer Sheva, Israel; [7]Shaare Zedek Medical Center, Cardiology, Jerusalem, Israel; [8]Gallilee Central Hospital, Cardiology, Nahariya, Israel

Background: Bleeding following percutaneous coronary interventions (PCI) for acute coronary syndromes (ACS) is associated with increased morbidity and mortality. Trans-radial access (TRA) has been shown to reduce bleeding risk and in some studies was associated with better clinical outcomes. Based on the results of the ACSIS 2010 nationwide registry, we describe current uptake of the radial approach for ACS patients undergoing PCI in Israel, and compare outcomes of these patients to patients undergoing angiography using trans-femoral access (TFA).
Methods: ACSIS is a 2-month biannual nationwide ACS survey which documents all ACS patients admitted to each of the 26 cardiac departments in Israel. Patient and procedural data were collected in the ACSIS-PCI 2010 registry for all patients undergoing PCI for acute coronary syndrome. Clinical characteristics, in-hospital and 30-day outcome were compared between TRA and TFA. All data handling was performed by the ACSIS registry team.
Results: Of 2,193 ACS patients, 1815 ACS patients underwent coronary angiography, 515 (28%) of which were primary PCI for STEMI. Of the total cohort TRA was performed in 613 (34%) and TFA in 1189 (66%) cases. TFA patients were marginally older (63.4±12 vs. 62±12 years, p=0.018). Previous CABG patients were less likely to undergo TRA (5% vs 12% TFA, p<0.001). No other major differences were noted in baseline clinical or angiographic features. In the primary PCI cohort, TRA patients were younger (59±11 vs. 61.7±12, p=0.018) and less likely to present with high risk STEMI (lower frequency of KILLIP class III-IV, initial TIMI 0-1 flow, and higher frequency of q-wave MI and low ejection fraction). Unadjusted 30 day outcomes are presented in the figure.
Conclusions: The radial approach is used frequently but selectively in ACS patients undergoing coronary angiography/PCI in Israel. Reduced bleeding rates and improved clinical outcomes were observed in the TRA treated cohort.