Chest Pain Management in Israeli Emergency Departments Participating in the 2DSPER Multicenter Study

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Background: The 2D-Strain Echocardiography for Diagnosing Chest Pain (CP) in the Emergency Room (2DSPER) is a multicenter study (10 centers) organized by the Israeli Echocardiography Research Group. Patients presenting with CP to the emergency department (ED) with suspected acute coronary syndrome (ACS), non-diagnostic ECG and normal initial troponin levels had an echocardiogram within 24h of CP. Offline 2D-strain analysis is performed in attempt to predict unfavorable outcome (ACS and/or significant coronary artery disease). We present initial findings regarding current management of patients with suspected ACS in Israel.
Methods: Data from the first 202 patients recruited from 9/2010 to 11/2011 (58±8y, 68% males) were analyzed. Seventy-one patients (35%) were recruited in primary care centers and 131 (65%) in referral centers.
Results: In referral centers 72/131pts (55%) were discharged directly from the ED compared to 4/71 (6%) in primary care centers ($p<0.0001$). Unfavorable outcomes occurred in 25/131pts (19%) in referral centers and in 12/71 (17%) in primary care centers (p=NS). Exercise tests were performed in 106pts (52%), radionuclide imaging studies in 5 (2%), stress/dobutamine echo studies in 2 (1%) and cardiac CTs in 32 (16%). Patients were more likely to undergo non-invasive testing in referral compared to primary care centers (80% vs. 41%, $p<0.0001$). TIMI score (1.6±1.9 vs. 1.6±1.1), use of invasive coronary angiography (21% vs. 28%) and revascularization (13% vs. 17%) rates were similar between centers (p=NS). Patients were more likely to be discharged without workup from primary care centers (41% vs. 15%, $p=0.0001$).
Conclusions: Patients with suspected ACS admitted to EDs in primary care centers were less likely to undergo non-invasive tests, and more likely to require hospital admission and to be discharged without additional tests compared to referral centers. It is unclear from the preliminary data whether these findings affect long-term outcome.