**CHEST PAIN EMERGENCY DEPARTMENT EVALUATION IN WOMEN, LESS THAN AGE 40 YEARS: CAN WE CHANGE PRACTICE HABITS?**

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Patients presenting with chest pain (CP) in emergency departments (ED) commonly undergo exercise tolerance testing (ETT) with nuclear imaging (NI). However, guidelines state if a patient has up to intermediate pretest probability for ischemic coronary artery disease (CAD), can exercise, and has a normal electrocardiogram (ECG), it is appropriate to conduct an ETT without imaging. In other recent studies, educational attempts to reduce diagnostic radiation in low risk populations were not successful. We hypothesized the implementation of a standardized algorithm for CP patients presenting to Charleston Area Medical Center (CAMC) ED would reduce evaluations using imaging and radiation exposure. We conducted a retrospective cohort study of a low risk population of females less than age 40 years presenting to the ED at CAMC with CP during two time periods: 1) five months before and 2) five months after implementing the “Stress Test Algorithm”. A total of 59 of 330 females underwent testing beyond standard ED evaluation. Diagnostic radiation was used in 52 of 59 (88.1%) of the total group, with 30 of 30 (100%) in the pre-algorithm group and 22 of 29 (76%) in the post-algorithm group (p=0.01). All tests were unrevealing for significant CAD, and no patients required further testing within 30 days. Our algorithm was associated with a decrease in evaluations using radiation in a low risk population at CAMC. None in the selected group had significant CAD demonstrated. Widespread access to a standardized algorithm for CP evaluation can assist in decreasing health care costs and radiation exposure.