STEMIs with Young age may fare similar to Elder age – An unexpected result.

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Background and Purpose:

Previous studies have shown that patients with Elder age (age >45) have adverse short and long term outcomes when compared to young age (≤45 years)1. However, previous studies did not exclude patients with poor prognostic conditions that are more common in patients >45 years of age and hence may translate into poor prognosis. Hence, the main purpose of this study was to compare mortality outcomes between young (≤45 years) STEMI patients and Elder (>45 years) STEMI patients.1 2

Methodology:

It was a retrospective cohort study done from 2013-2018 on 361 STEMI patients aged between 18-65 years who underwent immediate Coronary Catheterization and Percutaneous Intervention. Patients with poor prognostic conditions like previous MI, known LV Dysfunction, Prior revascularization, dialysis dependant and stroke patients were excluded. Patients were followed for Mortality outcomes for a total of 30 days post STEMI. Details of risk factors and Coronary lesion anatomy were noted on a Proforma.

Results:

Of the 361 patients selected, we identified 151 patients up to 45 years of age (mean age: 39.4 vs.59.9 years). Patients in the young group were predominantly men (90.0% vs. 72.0%, p<0.05), obese (51.0 % vs. 36.0%, p=0.01) and predominantly had Single vessel disease (67% vs. 45%, p<0.05) but had a lower prevalence of hypertension (31.0 % vs. 57.0%, p<0.05). Double and triple vessel disease was more commonly seen after age 45, (23% vs. 36%, p=0.01) and (8% vs. 18%, p=0.009) respectively. (figure 1)There was non-significant difference in regards to Diabetes (37% vs. 46.3%), Positive family history of Premature Coronary Artery Disease (47.2% vs. 53.6%) and Smoking status (45% vs. 36.4%). (figure 2). The relative risk for All-Cause-Mortality at 30 days post STEMI was found to be 1.4 (0.5-3.6) which was non-significant which did not change even after adjustment for potential confounders like obesity, diabetes, Positive family history of CAD, Smoking, etc. (figure 3)

Conclusion:

Young patients with STEMI may have similar short term (<30 days) mortality outcomes post STEMI compared to elder patients if patients with poor prognostic conditions e.g. history of Prior MI, Prior revascularisation, LV Dysfunction, End-stage renal disease or stroke are excluded.

References: