BACKGROUND

- Sparse data available on early intervention (intervention done ≤ 6 hours) versus late intervention (intervention done 6 to 24 hours) in patients presenting with non-ST segment elevation myocardial infarction (NSTEMI).
- While the role of early primary cutaneous intervention (PCI) in patients with STEMI is well established, controversy exists in NSTEMI population on optimal timing for invasive intervention where the culprit artery is often patent.

OBJECTIVES

- Our study sought to determine 30 day and 1 year clinical outcomes associated with percutaneous coronary intervention (PCI) at a large tertiary care referral center using 6 hours as a cut-off time.

METHODS

- Comprehensive retrospective analysis on 962 NSTEMI patients who underwent intervention within 24 hours of their presentation was performed from electronic medical record (Cerner and EPIC) from a single tertiary care center.
- Patients were divided into two groups: early intervention group (EIG: PCI ≤ 6 hours) and late intervention group (LIG: PCI ≥ 6 hours).
- Continuous and categorical variables are presented as mean ± standard deviation and counts (percentages) respectively. Comparison was performed using the Wilcoxon ranksum test, chi square, and Fishers exact tests as appropriate.

RESULTS

- Baseline demographics
  - | Characteristic | Overall (n=962) | Early intervention (n=437) | Late intervention (n=525) | P value |
  - | | n=962 | n=437 | n=525 | |
  - | Age | 65.1±14.4 | 65.1±14.4 | 65.1±14.4 | n/a |
  - | Pain | 328 (34.2%) | 175 (40.0%) | 153 (29.0%) | <0.0001 |
  - | Race | 914 (94.5%) | 394 (89.3%) | 520 (99.2%) | <0.0001 |
  - | Blood | 36 ± 19 | 34 ± 19 | 37 ± 19 | n/a |
  - | Hypertension | 656 (70.1%) | 336 (77.0%) | 320 (60.9%) | <0.0001 |
  - | Diabetes mellitus | 231 (24.2%) | 118 (26.9%) | 113 (21.0%) | 0.0233 |
  - | Dyslipidemia | 357 (37.2%) | 174 (39.6%) | 183 (34.8%) | n/a |
  - | Chronic kidney disease | 337 (35.2%) | 174 (39.6%) | 163 (31.0%) | <0.0001 |
  - | Prior coronary artery disease | 356 (36.2%) | 177 (39.6%) | 179 (34.0%) | 0.1156 |
  - | Prior vascular disease | 110 (11.5%) | 58 (13.1%) | 52 (9.9%) | 0.0077 |

- Cardiovascular outcomes
  - | Event | Total (n=962) | Early intervention (n=437) | Late intervention (n=525) | P value |
  - | 30 day MI | 31 (4.1%) | 13 (2.9%) | 18 (3.4%) | 0.2041 |
  - | 30 day CVA | 2 (0.2%) | 2 (0.2%) | 0 (0.0%) | 0.2750 |
  - | 30 day HF | 44 (4.6%) | 12 (2.7%) | 32 (6.1%) | 0.0208 |
  - | 30 day mortality | 14 (1.5%) | 6 (1.4%) | 8 (1.5%) | 0.2681 |
  - | 30 day mortality | 6 (0.6%) | 6 (0.6%) | 0 (0.0%) | 0.0208 |
  - | 30 day mortality | 10 (1.0%) | 2 (0.2%) | 8 (1.5%) | 0.0208 |
  - | 30 day mortality | 9 (0.9%) | 3 (0.4%) | 6 (0.9%) | 0.0208 |
  - | 30 day mortality | 14 (1.5%) | 6 (1.4%) | 8 (1.5%) | 0.2681 |
  - | 30 day mortality | 38 (6.0%) | 18 (4.2%) | 20 (5.4%) | 0.2681 |

- Mean age in years: 65.1 ± 14.4 years
- Mean pain score: 328 (34.2%) patients
- Mean race: 914 (94.5%) participants
- Mean blood pressure: 36 ± 19 mmHg
- Mean hypertension: 656 (70.1%) patients
- Mean diabetes mellitus: 231 (24.2%) participants
- Mean dyslipidemia: 357 (37.2%) participants
- Mean chronic kidney disease: 337 (35.2%) patients
- Mean prior coronary artery disease: 356 (36.2%) participants
- Mean prior vascular disease: 110 (11.5%) participants
- Mean 30 day MI: 31 (4.1%) events
- Mean 30 day CVA: 2 (0.2%) events
- Mean 30 day HF: 44 (4.6%) events
- Mean 30 day mortality: 14 (1.5%) events

CONCLUSION

- Our study, showed invasive intervention conducted within 24 hours, less than or equal to 6 hrs vs more than 6 hrs, has no difference in clinical outcomes (myocardial infarction, heart failure, cerebrovascular accident and mortality) at 30 days or at 1 year with the reperfusion practices in the NSTEMI population.

DISCLOSURES

All authors have nothing to disclose.