Gender Differences in Acute Cardiac Care: Where It's not (Poster)

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GENDER DIFFERENCES IN ACUTE CARDIAC CARE: WHERE IT'S NOT

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Objective

Many reports suggest gender disparity in cardiac care as a contributor to the increased mortality for women from heart disease. We set out to determine specifically if there were gender differences in the management of patients who presented to our facility with Acute ST Elevation Myocardial Infarction (STEMI).

Methods

A retrospective database based on chart abstraction was maintained for patients presenting to the ED of a large suburban teaching hospital network who had a MI alert STEMI from April 2000 through Aug. 2006. Included MI patients were those meeting criteria for a MI alert (a clinical practice guideline designed to expedite cardiac cath). Exclusionary MI patients were those who did not meet criteria (ex. refusal to consent, dye allergy, renal failure, inpatient infarcts, no ST elevation, etc). The majority of patients had chest pain, but the primary determinant of alert status was dependent on objective ST elevation. This EKG change precipitated the subsequent treatment regimens. The following data points were used as markers of therapy: time to EKG, receiving beta blockers, time to cath lab and time to balloon. Gender differences in EKG times were recorded based on any patient in the database regardless if they were later excluded. Data was analyzed using t-test for continuous and Fisher exact for categorical variables.

Inclusion Criteria

1) ST Elevation ECG (1 mm of elevation in two or more continuous leads) or Left Bundle Branch Block with discomfort suspicious for myocardial infarction
2) Discomfort (chest pain, angina, neck or jaw pain, syncope, associated shortness of breath, etc) that started within 12 hours of arrival.

Exclusion Criteria

- Those not meeting criteria for MI alert
- Patients who presented at remote site hospitals
- Patient refusal
- No femoral or line access for catheterization
- Cath lab veto
- Renal failure
- ST elevation only present on second or later ECG
- Advanced directive that prevents intervention
- Thrombocytopenia
- Coumadin therapy
- No consent
- ED physician is uncertain
- In-hospital infarcts
- Diffuse vascular disease within the coronary arteries may be exclusionary, as well as other comorbidities

Results

1348 MI alert charts were analyzed. 921 (68.3%) male and 427 (31.7%) female. Time to EKG for males was 10.03 ± 30.57 minutes and females was 12.99 ± 35.25 minutes ($p \geq 0.151$). 601 male (75.8%) and 276 female (75%) patients received beta blockers. ($p \geq 0.77$). A total of 957 MI alert patients went to the cath lab: 668 males and 289 females. Mean time to cath lab arrival was 61.32 ± 31.10 minutes for men and 64.58 ± 31.73 for women ($p \geq 0.139$). Time to balloon was 91.59 ± 50.81 for males and 92.95 ± 31.12 for females ($p \geq 0.709$)

MI Alert Process

The MI Alert process was developed and implemented in the Emergency Department (ED) in April 2000. It was designed to identify patients with ST elevation on ECG and move them through the ED to intervention as quickly as possible. Currently, the American Heart Association recommends that patients receive intervention within 90 minutes. Our institution has already exceeded that goal with average door to intervention times of 78 minutes. We continue to set the bar higher; and are currently attempting to reach an average intervention time 60 of minutes.

Conclusions

No significant gender differences are apparent in the STEMI patients analyzed.