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Acute Coronary Syndromes

ANTIPLATELET AND ANTICOAGULANT USE FOR ACUTE MYOCARDIAL INFARCTION IN EMERGENCY DEPARTMENT: "A CASE FOR QUALITY IMPROVEMENT" - AN ANALYSIS FROM NATIONAL HOSPITAL AMBULATORY MEDICAL CARE SURVEY 2002-2010

Poster Contributions

Hall C

Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Acute Coronary Syndromes: Treatment Considerations

Abstract Category: 1. Acute Coronary Syndromes: Clinical

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Background: Quality improvement registries have shown high antiplatelet (ap) and anticoagulant (ac) use within 24 hours of hospitalization for acute myocardial infarction (AMI). But, unbiased national estimate of utilization of these therapies in emergency department (ED) is not known.

Methods: We analyzed data from National Hospital Ambulatory Medical Care Survey (NHAMCS), a national probability sample of ED visits, from 2002-2010 to include > 18 years non-pregnant visits with a diagnosis AMI and no contraindications to ap or ac. Multivariable logistic models were used to calculate odds ratio. All analyses were done taking into account the complex survey design to produce reliable national estimates.

Results: There were 4,979,907±357,445 estimated ED visits for diagnosis of AMI over 9 years. Aspirin was administered in 43.6±2.5%, 43.7±3.2% and 43.8±3.9% visits for AMI in 2002-04, 2005-07 and 2008-10 respectively. Use of thienopyridine (Th) or glycoprotein IIb/IIIa inhibitors (GPI) increased during this time period - 10.1±1.5%, 13.0±2.3% and 17.8±3% (ptrend = 0.015). Ac use remained stable - 31.5±2.4%, 33.1±2.9% and 36.2±3.8% (ptrend = 0.26). Even in confirmed primary diagnosis of AMI their use remained low, aspirin - 49.4±3.5%, 51.0±4.8% and 45.6±5.2% (ptrend = 0.54), Th/GPI - 23.8±3.3%, 23.1±4.4% and 30.2±4.8% (ptrend = 0.28) and ac - 57.0±3.9%, 56.5±5.4% and 53.5±5.6% (ptrend = 0.60). In multivariable adjusted models aspirin use was associated with systolic blood pressure (OR = 1.05, 95% CI 1.01 - 1.10), arrival by ambulance (OR = 0.48 95% CI 0.34-0.69) and location in metropolitan area (OR = 1.86 95% CI 1.22-2.86) and south (OR = 0.68 95% CI 0.68-0.95). Female sex (OR = 0.59 95% CI 0.43-0.81) and typical symptoms (OR = 1.60 95% CI 1.17-2.18) were associated with ac use. Length of visit (OR = 0.97 95% CI 0.95 - 0.99) and location in metropolitan area (OR = 2.48 95% CI 1.12 - 5.47) were associated with Th/GPI use. Evaluation by consultant increased the odds of Th/GPI (OR = 1.98 95% CI 1.11-3.52) and ac (OR = 1.40 95% CI 1.02-1.94) use.

Conclusion: Use of ap and ac in ED for AMI visits, including definitive AMI, remains low. An early evaluation by a consultant is associated with higher ap and ac use.