



MYOCARDIAL ISCHEMIA AND INFARCTION

**NEW OR PRESUMED NEW LEFT BUNDLE BRANCH BLOCK IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION: FINDINGS FROM ACTION REGISTRY-GWTG**

ACC Poster Contributions  
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**Background:** Guidelines recommend urgent reperfusion for patients with new left bundle branch block (LBBB) similar to patients with ST segment elevation myocardial infarction (STEMI). There are, however, limited contemporary data comparing both groups of patients (pts).

**Methods:** Pts presenting with acute STEMI or presumed new LBBB enrolled in ACTION Registry -GWTG between January 2007 and March 2009 were evaluated for clinical characteristics, treatment patterns and outcomes. Logistic generalized estimating equation modeling was used to examine associated risk-adjusted mortality.

**Results:** Of 46006 patients with either STEMI or LBBB, 44405 (96.5%) had STEMI and 1601 (3.5%) had new LBBB. Overall, new LBBB pts had more baseline comorbidities compared with STEMI pts (Table). Compared with STEMI pts, new LBBB pts were less likely to receive acute reperfusion (93.9% vs. 48.3% p<0.0001), and were less likely to have a door-to-balloon time <90min (76.8% vs. 34.5%, p<0.0001). Mortality rates were higher for new LBBB compared with STEMI pts (13.3% vs. 5.6%, p<0.0001). After multivariable adjustment, new LBBB was not associated with an increased risk of in-hospital mortality (OR: 0.91, 95% CI: 0.75-1.12, p=0.38)

**Conclusion:** New LBBB pts were clinically different from STEMI pts with significantly more comorbidities, and were less likely to receive emergent reperfusion therapy. These differences between groups suggest reevaluation of risk stratification and management strategies for pts with presumed new LBBB.

Table: clinical characteristics, angiographic findings and outcomes

Variable	STEMI ( N = 44405)	LBBB (N=1601)	P-value
Median age (years)	60.0	74.0	<0.0001
Male gender (%)	70.3	55.1	<0.0001
Diabetes mellitus (%)	21.9	40.4	<0.0001
Median initial eGFR (ml/min)	72.9	57.2	<0.0001
Prior myocardial infarction (%)	18.8	28.4	<0.0001
Prior congestive heart failure (%)	4.4	23.9	<0.0001
Prior CABG (%)	6.5	19.2	<0.0001
Prior stroke (%)	4.8	11.6	<0.0001
Signs of heart failure on presentation (%)	11.0	43.8	<0.0001
Diagnostic angiography (%)	93.7	81.6	<0.0001
No significant disease on angiography (%)	2.6	7.3	<0.0001

CABG: coronary artery bypass graft surgery  
 eGFR: estimated glomerular filtration rate using the MDRD formula in non-dialysis patients  
 PCI: percutaneous coronary intervention