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Heart Failure

ARE VASODILATORS OF ANY VALUE IN THE CARE OF HOSPITALIZED ACUTE HEART FAILURE PATIENTS?

ACC Moderated Poster Contributions
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Background: Despite limited evidence, guidelines recommend the use of IV vasodilators in addition to diuretics for the treatment of acute heart failure (AHF) patients (pts) who are not hypotensive. We investigated whether pts hospitalized for AHF and treated with IV loop diuretics (D) in combination with IV Nitrates (NT) or IV Nesiritide (NES) achieve better outcomes compared to those receiving D alone.

Methods: Hospital records (2007-2009) from the Marketscan Hospital Drug Database were analyzed to identify pts with a primary diagnosis of AHF. Pts < 18 years old, with hypotension, cardiogenic shock, myocardial infarction, and acute coronary syndromes were excluded. Pts receiving D were matched pair-wise with pts receiving D+NT or D+NES using the propensity score approach. Outcomes included in-hospital mortality, hospital length of stay, and costs during the first AHF hospitalization.

Results: D+NT (N=4,401) and D+NES (N=2,254) pts had longer length of stay vs. D pts. Mortality was similar to D pts among D+NT but higher among D+NES pts. Total costs were significantly greater in both vasodilator cohorts.

Conclusions: This real world study of hospitalized AHF pts indicates that neither NT nor NES in addition to D improve survival compared to D alone, and are associated with length of stay more than 1.5 days longer and total costs of hospitalization 57% higher. These data raise the question as to whether currently utilized IV vasodilators are of any value in the treatment of hospitalized pts with AHF.

	Pair-Wise Treatment Comparisons					
	D alone N=4,401	D+NT N=4,401	P-Value	D alone N=2,254	D+NES N=2,254	P-Value
Age, Mean (SD)	70.1 (14.3)	70.1 (14.3)	0.93	70.4 (13.7)	70.4 (13.7)	0.98
Male	49.3%	49.2%	0.93	59.2%	59.1%	0.90
Comorbid Conditions						
Renal disease	45.9%	45.9%	1.0	50%	50%	1.0
Chronic kidney disease	35.4%	35.6%	0.85	38.7%	39.0%	0.86
Acute renal failure	25.5%	25.5	1.0	27.6%	27.6%	1.0
Diabetes	43.0%	42.0%	0.32	46.4%	45.6%	0.61
Hypertension	75.2%	74.2%	0.28	64.5%	63.5%	0.47
Dyspnea	1.0%	1.2%	0.48	1.3%	1.6%	0.54
Length of Stay (days), Mean (SD)						
Total	5.7 (5.2)	7.3 (8.5)	<0.01	5.8 (5.1)	7.9 (7.2)	<0.01
ICU	1.5 (3.3)	2.2 (4.7)	<0.01	1.7 (3.5)	2.5 (5.1)	<0.01
In-Hospital Mortality, %	1.9	2.0	0.88	2.2	3.1	0.05
Total Cost, Mean (SD)	$8,949 (10,072)	$14,016 (19,150)	<0.01	$9,057 (10,964)	$14,210 (17,942)	<0.01