[429] Midodrine Increases Blood Pressure in Hypotensive Heart Failure Patients Facilitating Optimization of Heart Failure Therapy Leading to Improved Outcomes

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Background: In many patients, the treatment of Heart Failure (HF) cannot be optimized because of pre-existing or treatment induced hypotension. An increase in the baseline Blood Pressure in such patients may lead to a better tolerance of their medical therapy and therefore a better outcome. Midodrine is a peripheral alpha1-adrenergic agonist that is FDA approved for the treatment of orthostatic hypotension. It's use in patients with HF is not known.
Methods: 10 consecutive patients with HF due to systolic dysfunction and symptomatic hypotension interfering with optimal medical therapy were prospectively studied. Patients were started on Midodrine at a dose of 5mg po q6h and increased to a maximum of 10mg q6h. Blood Pressure, serum BNP was recorded at inclusion, and 6 months as well as changes in patients HF medications. An echocardiogram was performed within six months prior to midodrine initiation and at 6 months. The number of hospital admissions and hospital days were recorded before and during midodrine treatment.
Results: SBP increased from baseline of 79.2 ± 4.6 to 99.0 ± 11 mmHg ($p < 0.0004$), BNP decreased from 1402 ± 1559 to 706 ± 592 ($p< 0.0001$), and NYHA Class decreased from 3.5 to 2.4 at six months. The use of Ace-Inhibitors/ARBs increased from 54 to 81 %, Beta-Blockers from 82 to 100 %, and Spironolactone/Epleronone from 72.7 to 91% of optimal dose. LVEF increased from baseline of 24 ± 9.44 to 32.2 ± 9.9 % ($p< 0.001$), and LVEDD decreased from baseline of 6.2 cm to 5.9 cm ($p = 0.04$).
Co*nclusion*: The use of midodrine is safe in patients with heart failure due to systolic dysfunction with hypotension despite concerns regarding vasoconstiction. Furthermore, it allowed patients to receive optimal medical therapy with neurohormonal antagonists leading to significant improvements in reverse remodeling manifested by increases in LVEF, reduction in LVEDD and improved outcomes.

Results

	Baseline	6 months
SBP (mmHg)	79.2 ± 4.6	99.0 ± 11
NYHA Class	3.5 (Class IV 5;Class III 5;Class II 1, Class I 0)	2.4 (Class IV 1; Class III 4, Class II 3; Class I 2)
BNP (pg/mL)	1402 ± 1559	706 ± 592
ACE/ARB (%)	54	81
Beta Blockers (%)	82	100
Aldactone/Epleronone (%)	73	91
LVEF (%)	24 ± 9.4	32.2 ± 9.9
LVEDD (cm)	62 ± 7.5	59 ± 8.7
Total Hospital Admissions	32	12
Total Hospital Days	150	58

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Poster: Clinical Care/Management

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