Norepinephrine is More Effective Than Midodrine/Octreotide in Patients With Hepatorenal Syndrome-Acute Kidney Injury: A Randomized Controlled Trial

Doaa Hamed , Eman Ibrahim El-Desoki Mahmoud,Sherief Abd-Elsalam and Noha O. Mansour

Abstract

Background: Terlipressin is the first-line pharmacological treatment for hepatorenal syndrome. When terlipressin is unavailable, midodrine/octreotide or norepinephrine, with albumin, represent the alternative treatments. The comparative efficacy of these alternative regimens remains unclear.
Objective: To compare the efficacy of midodrine/octreotide to that of norepinephrine for the treatment of patients with hepatorenal syndrome.
Methods: In the intensive care setting, sixty patients with hepatorenal syndrome were randomized to initially receive either 0.5 mg/h of norepinephrine (maximum 3 mg/h) or 5 mg of oral midodrine three times/day (maximum 12.5 mg three times/day) plus octreotide (100 εg/6 h) as subcutaneous injection (maximum 200 εg/6 h), together with albumin (20ï40 g/day). Treatment was allowed for a maximum of 10 days. Survival was analyzed for up to 30 days. The primary efficacy outcome was the proportion of patients who achieved full response, defined as the return of serum creatinine to a value within 0.3 mg/dl of the baseline at the end of treatment.
Results: There was a significantly higher rate of full response in the norepinephrine group (15/26, 57.60%) than the midodrine/octreotide group (5/25, 20%) (p = 0.006). Eleven (42.30%) patients in the norepinephrine group and 6 (24%) in the midodrine/octreotide group survived (p = 0.166).
Conclusion: Norepinephrine plus albumin is significantly more effective than midodrine and octreotide plus albumin in improving renal function in patients with hepatorenal syndrome.

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