short & snappy
-A CLINICAL OVERVIEW

Under Pressure: Octreotide in Hepatorenal Syndrome

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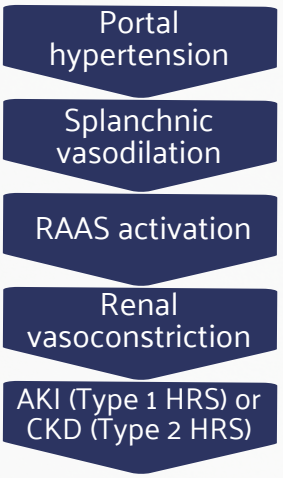
Case: 50-year-old male presented with an altered level of consciousness, blood pressure of 95/65 mmHg, and acute kidney injury (SCr 152 mcmol/L from baseline 60 mcmol/L). Past medical history included alcoholic cirrhosis, ascites, esophageal varices, and spontaneous bacterial peritonitis. Midodrine and octreotide were started for possible hepatorenal syndrome.

Hepatorenal syndrome (HRS): Renal dysfunction associated with chronic liver disease, not attributed to other causes. [1]

Clinical Question: In patients with hepatorenal syndrome, to what degree does octreotide improve mean arterial pressure (MAP) and renal function compared to other vasopressors?



	Design (n)	Regimen	MAP Effects	Renal Effects
Kiser 2005 [2]	Retrospective cohort (43)	Vasopressin infusion 0.01-0.8 units/hr vs octreotide infusion 50-120 mcg/h	Reported as responders or not instead of per drug	38% vs 0% complete response (SCr < 133 mcmol/L)
Cavallin 2015 [3]	Randomized controlled trial (49)	Terlipressin 3-12 mg/h infusion vs midodrine 7.5 mg tid + octreotide 100-200 mcg SC tid	82 vs 75 mmHg, p=0.05	Terlipressin superior (SCr <133 mcmol/L or 50% decrease): 70.4% vs 28.6%, p=0.01
Tavakkoli 2012 [4]	Randomized controlled trial (23)	Norepinephrine 0.1-0.7 mcg/kg/min vs Midodrine 5-15 mg tid + octreotide 100-200 mcg SC tid	12 vs 11 mmHg increase (p-values not reported)	72% vs 75% complete response (≥ 30% decrease in SCr or SCr < 133 mcmol/L)

Bottom line: Previous studies have shown possible improvement in renal function with octreotide. [5] In small RCTs, **octreotide was less effective than vasopressors** in improving MAP and renal function. [2-4] However, **octreotide may be administered in non-ICU settings** as constant monitoring is not required. [1] This makes it an option for less critical patients, often in combination with midodrine and albumin with the goal of further MAP support and renal function improvement.

References
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