Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.53555/ms7f7633

RESOLUTION OF HEPATORENAL SYNDROME IN A 50-YEAR-OLD MALE WITH TERLIPRESSIN THERAPY: A CASE REPORT

Dr Nalla Varun Reddy[1*], Dr Manish Mahlawat[2], Dr. Trishool Surya[3], Dr RP Gupta[4]

[1*]Pg Resentment of General Medicine, KM Medical College and Hospital
[2]Pg Resident, Dept of General Medicine, KM Medical College and Hospital
[3]Pg Resident, Dept of General Medicine, KM Medical College and Hospital
[4]Professor & Head of Department, Dept of General Medicine

***Corresponding Author:** Dr Nalla Varun Reddy
[*]Pg Resentment of General Medicine, KM Medical College and Hospital

ABSTRACT

Background

Hepatorenal Syndrome (HRS) is a severe and potentially reversible renal dysfunction seen in patients with advanced liver disease. Prompt diagnosis and treatment are essential to prevent progression and improve survival.

Case Presentation

We present the case of a 50-year-old male with decompensated cirrhosis who developed Type 1 HRS. The patient was treated with intravenous albumin and terlipressin. Significant clinical and biochemical improvement was noted within one week of therapy.

Conclusion

Early identification and initiation of terlipressin therapy can lead to complete resolution of HRS, potentially reducing the need for dialysis and bridging patients to liver transplantation.

Keywords: Hepatorenal syndrome, Terlipressin, Cirrhosis, Acute kidney injury, Terlipressin

Case Presentation

Patient Information

A 50-year-old male, Mr. ABC, shop keeper by occupation presented with complaints of reduced urine output, increasing abdominal distension, and generalized fatigue for 5 days. He was a known case of alcohol-related decompensated cirrhosis for 2 years with Umbilical Hernia

Clinical Findings

>General Examination: Icterus, bilateral pedal edema
>Vitals: BP - 100/60 mmHg, Pulse - 96/min
> Abdominal Examination: Ascites, no tenderness
>Neurological: No evidence of hepatic encephalopathy
>No evidence of sepsis or bleeding

Investigations on Admission:

Serum Creatinine: 3.2 mg/dL (baseline 1.1 mg/dL 2 weeks prior)
Blood Urea Nitrogen (BUN): 58 mg/dL

Serum Sodium: 128 mEq/L
Bilirubin: 8.6 mg/dL
INR: 2.1
Urinalysis: Bland sediment, no proteinuria or hematuria
Ultrasound: Normal-sized kidneys with ascites and coarse liver echotexture
Exclusion of shock, nephrotoxic drugs, and intrinsic kidney disease

Diagnosis
Type 1 Hepatorenal Syndrome (as per ICA diagnostic criteria)
Treatment
Terlipressin: 1 mg IV every 6 hours, titrated up to 2 mg IV every 6 hours based on response
Albumin: 1 g/kg on day 1 (max 100 g), followed by 20-40 g/day
Supportive Care: Fluid and electrolyte management, avoidance of nephrotoxic agents

Outcome
Over the course of 7 days:
Urine output improved from <500 mL/day to >1500 mL/day
Serum creatinine decreased to 1.4 mg/dL
Hemodynamic parameters stabilized (BP improved to 110/70 mmHg)
No major adverse effects from terlipressin
Patient was monitored for another 5 days and discharged with stable renal function, awaiting further management of liver disease including consideration for liver transplantation.

Discussion
HRS Type 1 is associated with rapid deterioration and high mortality. Terlipressin acts on splanchnic vasculature to reduce asodilation, improving effective arterial volume and renal perfusion. In this case, the prompt initiation of terlipressin led to reversal of renal failure without dialysis. The response highlights the importance of early diagnosis and treatment, along with exclusion of other causes of acute kidney injury in cirrhotics.

Conclusion
Terlipressin is an effective treatment for Type 1 HRS, capable of reversing renal dysfunction and improving short-term outcomes. Timely intervention can delay the need for renal replacement therapy and serves as a bridge to definitive treatment via liver transplantation.

References
1. Angeli P, et al. Diagnosis and management of acute kidney injury in patients with cirrhosis: Revised consensus recommendations. J Hepatol. 2015.
2. Boyer TD, et al. Terlipressin plus albumin improves renal function in hepatorenal syndrome. Gastroenterology2008.
3. European Association for the Study of the Liver. EASL Clinical Practice Guidelines: Management of decompensated cirrhosis. J Hepatol. 2018.