Decerebrate Posturing and Convulsions: A Rare Hepatic Encephalopathy Presentation

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Introduction

Hepatic encephalopathy (HE) is an acute neuropsychiatric syndrome complicating liver failure.

Decebrate Posturing is a **medical emergency** and an uncommon sign in the setting of hyperammonemia.

Our report details a patient acutely progressing, within hours, from grade 0 HE to grade IV comatose HE with posturing and convulsions hours after revision of TIPS.

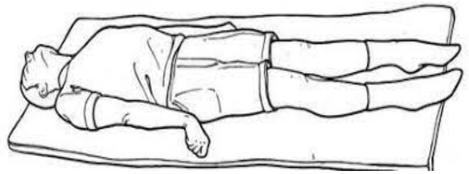

Figure 1. Decebrate posturing

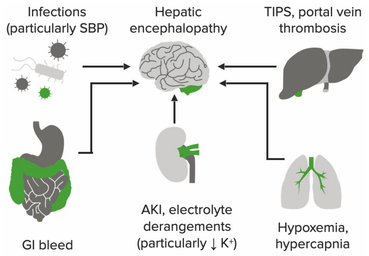

Figure 2. Common causes of HE

Case Description

62-year-old Hispanic male with past medical history of treated hepatitis C infection, **decompensated alcohol-induced liver cirrhosis, hepatocellular carcinoma** on chemotherapy, type 2 diabetes mellitus and peptic ulcer disease presented with a **1 day history of hematemesis.**

- TIPS placement 1 month prior due to **recurrent variceal bleeding** and **no previous history of HE**
- Prescribed **oral lactulose** as a home medication

Day 1: Patient was fully alert and oriented without focal neurological findings. Esophagogastroduodenoscopy performed with 3 endoscopic variceal ligations done for bleeding grade 2 esophageal varices.

Day 3: IR consulted due to recurrent variceal bleed. CT abdomen/ pelvis ordered to evaluate TIPS revealed a **partial thrombus** in the shunt on imaging and he underwent **TIPS revision** along with gastric artery embolization.

Day 4: Overnight the patient became acutely altered, hypertensive, tachycardic and had **witnessed convulsions**. He was upgraded to the intensive care unit. Started on **lactulose enemas** every 6 hrs with **PO lactulose** every 2 hrs. (see Management)

Day 4-7 ICU: day 6 he had a **bowel movement which resulted in improved mentation.**

Day 8-9: Downgraded to floors, discharged **with rifaximin and nadolol** prescription

Case Description cont.

Vitals: Tachycardia and Hypertension
Physical exam: revealed jerking movements and **decerebrate posturing** (arms/legs extended at sides with head/neck arching back, Figure 1.) with a fixed left upper gaze
Labs: CMP/CBC/lactate/ammonia ordered, abnormal labs (table 1)
Imaging: CT head and abdomen/pelvis were ordered and both revealed no acute abnormalities.
EEG reported encephalopathy of severe nature

Management

The patient was continued on oral lactulose (titrated to 2-3 BM/day) with addition of lactulose enemas in the ICU which resulted in multiple bowel movements and an improvement in mentation.

Lab	Value	Normal Range
Ammonia	387	0-38 µmol/L
Lactate	8	0-2 mmol/L
Bicarbonate	13	23-30 mEq/L
Anion Gap	20	5-15 nml

Table 1. Pertinent abnormal patient labs when patient was acutely encephalopathic

Discussion

HE inciting factors (figure 2): in our patient variceal bleed vs recent sedation vs TIPS-plasty could have resulted in HE.

A literature review (7 cases total) of similar case reports revealed:

- All patients were greater than **50 years old**
- Cirrhosis was due to **alcohol abuse**
- Most common risk factor resulting in decompensation was **GI bleed**
- **Development of coma and posturing was rapid** from onset of altered mentation

Globally a rising number of patients are developing cirrhosis and its complications, we anticipate an increasing number of patients presenting with this manifestation of advanced HE.

Conclusions

Early recognition of posturing as a rare sign in the setting of HE can improve both early diagnosis and treatment resulting in **decreasing cost from excessive workup and length of hospital stay**.

Contact

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References

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3. Tasnim, Saria et al. "Reversible Decerebrate Posture in Hepatic Encephalopathy: Case Report and Literature Review." *Cureus* vol. 14,2 e21960. 6 Feb. 2022, doi:10.7759/cureus.21960