HEPATIC ENCEPHALOPATHY

Find the precipitant · lactulose · protect the airway

FIND THE *trigger*

WEST HAVEN GRADE: I altered mood / sleep · II lethargy, disorientation, asterixis · III marked confusion, drowsy but rousable · IV coma. Grade III-IV → protect the airway, ICU.

FIND & TREAT THE PRECIPITANT

- **Infection -** sepsis, spontaneous bacterial peritonitis - ascitic tap everyone
- **GI bleed -** variceal / other - blood is a protein load
- **Constipation -** the commonest trigger; ensure stool output
- **Electrolytes / fluids -** ↓ K, ↓ Na, dehydration, over-diuresis, alkalosis
- **Drugs -** sedatives, opioids; renal failure; TIPS; non-adherence to lactulose

TREAT *lower ammonia + support*

- **Lactulose -** titrate to 2-3 soft stools/day (PO / NG); enema if unsafe to swallow
- **Rifaximin -** add for recurrent HE; reduces relapse
- **Nutrition -** do NOT restrict protein; feed - malnutrition worsens HE
- **Correct -** electrolytes, volume; stop sedatives; treat the trigger
- **Airway -** grade III-IV: consider intubation for protection; ICU care

EXCLUDE MIMICS: hypoglycaemia · intracranial bleed (coagulopathy + falls) · Wernicke · sepsis · uraemia · drug / alcohol effects. Ammonia is NOT needed to diagnose or to monitor - treat clinically.

LOWER THE AMMONIA · STEPWISE *titrate to stool output*

1. Lactulose 30-45 mL PO / NG every 1-2 h until stool, then titrate to 2-3 soft stools/day
2. Add rifaximin 550 mg BD - reduces recurrence, hospitalisation and mortality
3. Cannot swallow safely: lactulose retention enema (300 mL in ~700 mL water)
4. Refractory: recheck for an ongoing trigger or large portosystemic shunt; consider LOLA; discuss transplant

MANAGE THE DECOMPENSATION TOO *look for these together*

SBP

Ascitic tap in EVERY decompensation. PMN > 250 → ceftriaxone + IV albumin (1.5 g/kg day 1, 1 g/kg day 3).

VARICEAL BLEED

Terlipressin + ceftriaxone + endoscopy ≤ 12 h (see Upper GI Bleed #33). Clear blood from the gut.

HRS-AKI / SODIUM

Albumin volume; terlipressin for hepatorenal AKI; stop diuretics / nephrotoxins. Correct low Na SLOWLY.

SECONDARY PREVENTION: lactulose + rifaximin long-term · nutrition (protein 1.2-1.5 g/kg, small frequent meals + a late-evening snack) · treat and avoid triggers. Recurrent HE marks poor prognosis - refer for transplant assessment.

PEARLS & PITFALLS

- Hepatic encephalopathy is a diagnosis of the precipitant - always look for infection, bleeding or constipation.
- Titrate lactulose to stool output, not to a blood ammonia level - ammonia does not guide therapy.
- Do not protein-restrict; feeding improves outcomes, and malnutrition is common in cirrhosis.
- New confusion in cirrhosis with falls / coagulopathy? Image the head to exclude a bleed.

References: AASLD/EASL Hepatic Encephalopathy 2014 · standard hepatology & critical-care references.

Educational aid; verify doses against local protocol and patient factors.