

The Chronic Liver Disease Foundation (CLDF) and the International Coalition of Hepatology Education Providers (IC-HEP) present:

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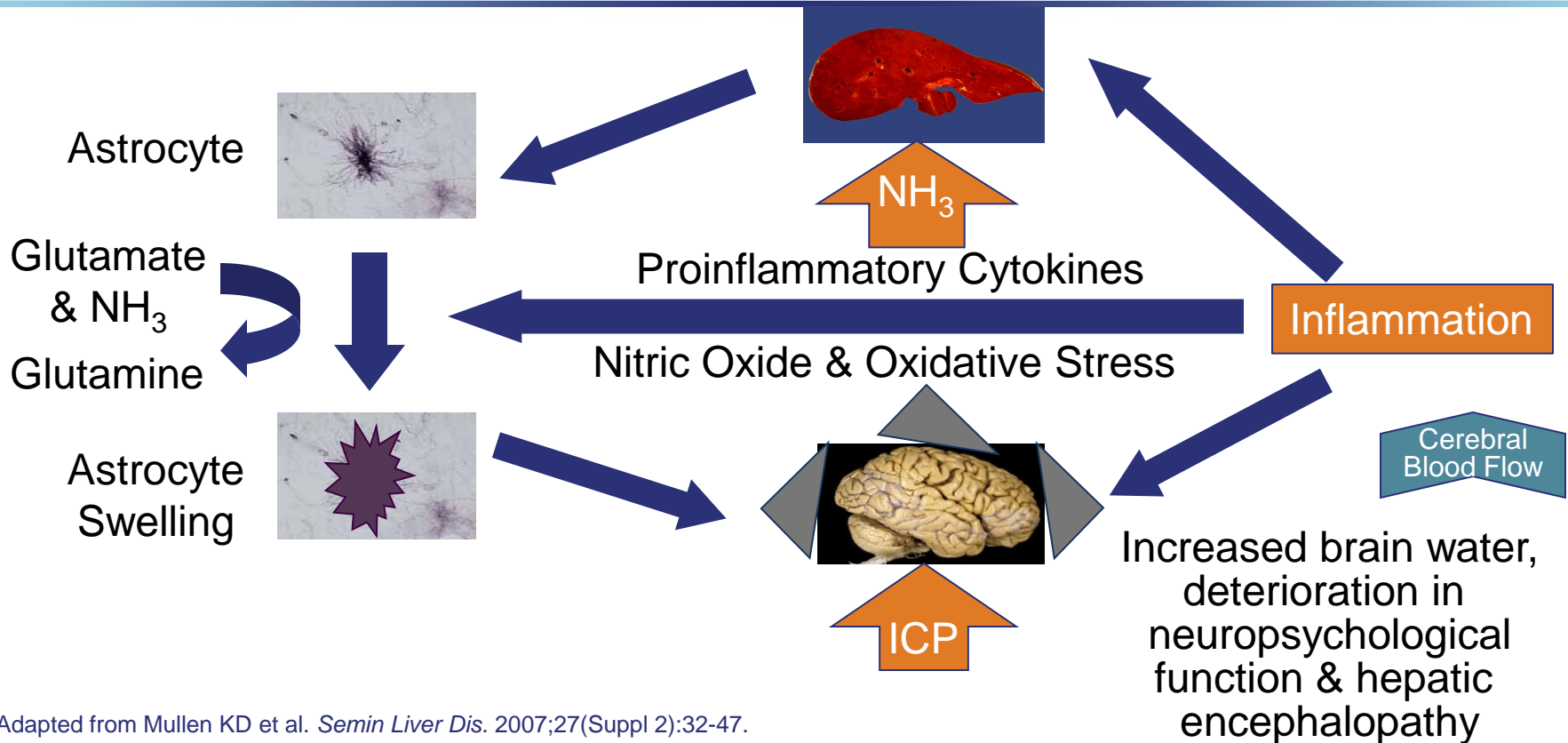


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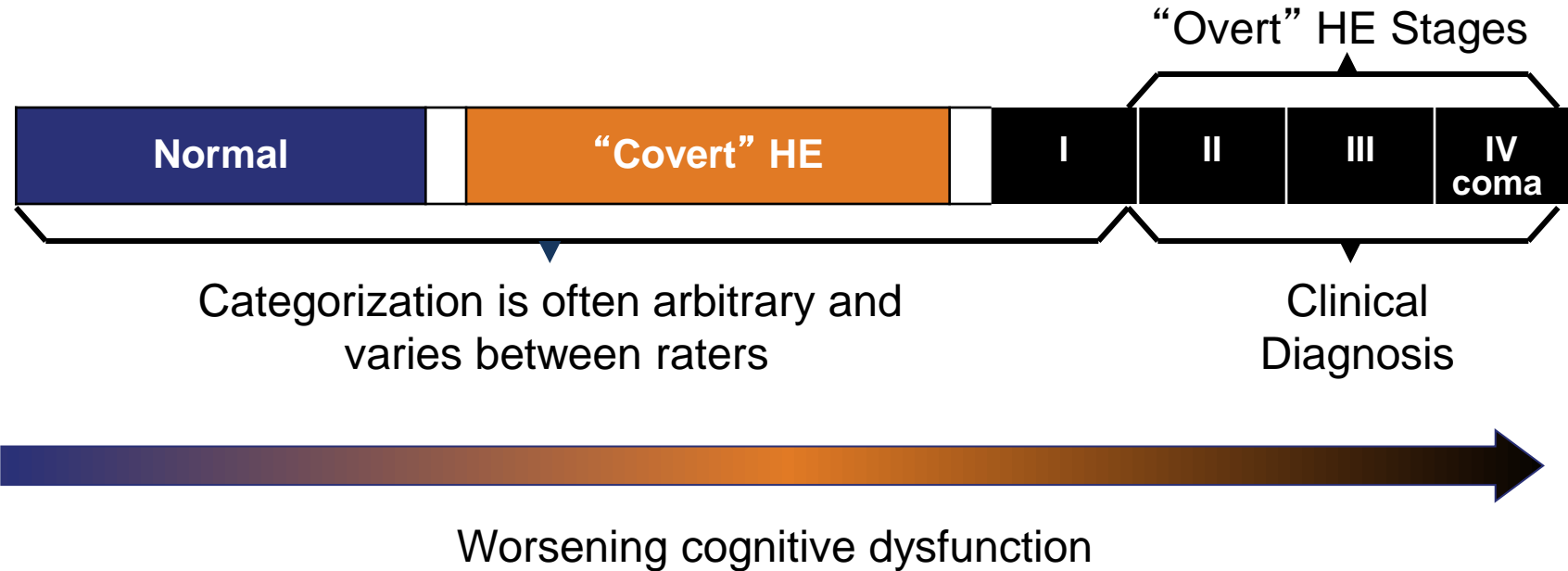


Hepatic Encephalopathy

Hepatic Encephalopathy: Pathophysiology



Characterization of HE Stages



New Guidelines for Hepatic Encephalopathy

AASLD PRACTICE GUIDELINE

Hepatic Encephalopathy in Chronic Liver Disease: 2014 Practice Guideline by the American Association for the Study of Liver Diseases and the European Association for the Study of the Liver

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Clinical Classification of HE

| Type | Grade | | Time Course | Spontaneous or Precipitated |
|------|-------|------------|-------------|-----------------------------|
| A | MHE | Covert | Episodic | Spontaneous |
| | 1 | | Recurrent | |
| B | 2 | Overt | | Precipitated (specify) |
| | 3 | | | |
| C | 4 | Persistent | | |

Hepatic encephalopathy should be classified according to the type of underlying disease, severity of manifestations, time course, and precipitating factors (GRADE III, A, 1).

Role of Ammonia Testing in HE

- “Increased blood ammonia alone does not add any diagnostic, staging, or prognostic value for HE in patients with CLD. A normal value calls for diagnostic reevaluation (GRADE II-3, A, 1)”

Specific Approach to Overt HE Treatment

- Four-pronged approach to management of HE (GRADE II-2, A, 1):
 - Initiation of care for patients with altered consciousness
 - Alternative causes of AMS should be sought and treated
 - Identification of precipitating factors and their correction
 - Commencement of empirical HE treatment

Management of Overt HE (OHE)

- Identify and treat precipitating factors for HE (GRADE II-2, A, 1)
 - Controlling precipitating factors is critical, because nearly 90% of patients can be treated with correction of the precipitating factor alone¹
- Lactulose is the first choice for treatment of episodic OHE (GRADE II-1, B, 1)
- Rifaximin is an effective add-on therapy to lactulose for prevention of OHE recurrence (GRADE I, A, 1)
- Neomycin is an alternative treatment of OHE (GRADE II-1, B, 2)
- Metronidazole is an alternative treatment of OHE (GRADE II-3, B, 2)
- Lactulose is recommended for prevention of recurrent episodes of HE after the initial episode (GRADE II-1, A, 1)
- Rifaximin as an add-on to lactulose is recommended for prevention of recurrent episodes of HE after the second episode (GRADE I, A, 1)
- Routine prophylactic therapy (lactulose or rifaximin) is not recommended for the prevention of post-TIPS HE (GRADE III, B, 1)
- Under circumstances where the precipitating factors have been well controlled (i.e., infections and VB) or liver function or nutritional status improved, prophylactic therapy may be discontinued (GRADE III, C, 2)

1. Strauss E et al. Double-blind randomized clinical trial comparing neomycin and placebo in the treatment of exogenous hepatic encephalopathy. *Hepatogastroenterology* 1992;39:542-545

Treatment Approach for Episodic OHE: Lactulose + Rifaximin vs. Lactulose

172 Cirrhotic Patients Screened



120 Patients Enrolled



Randomization

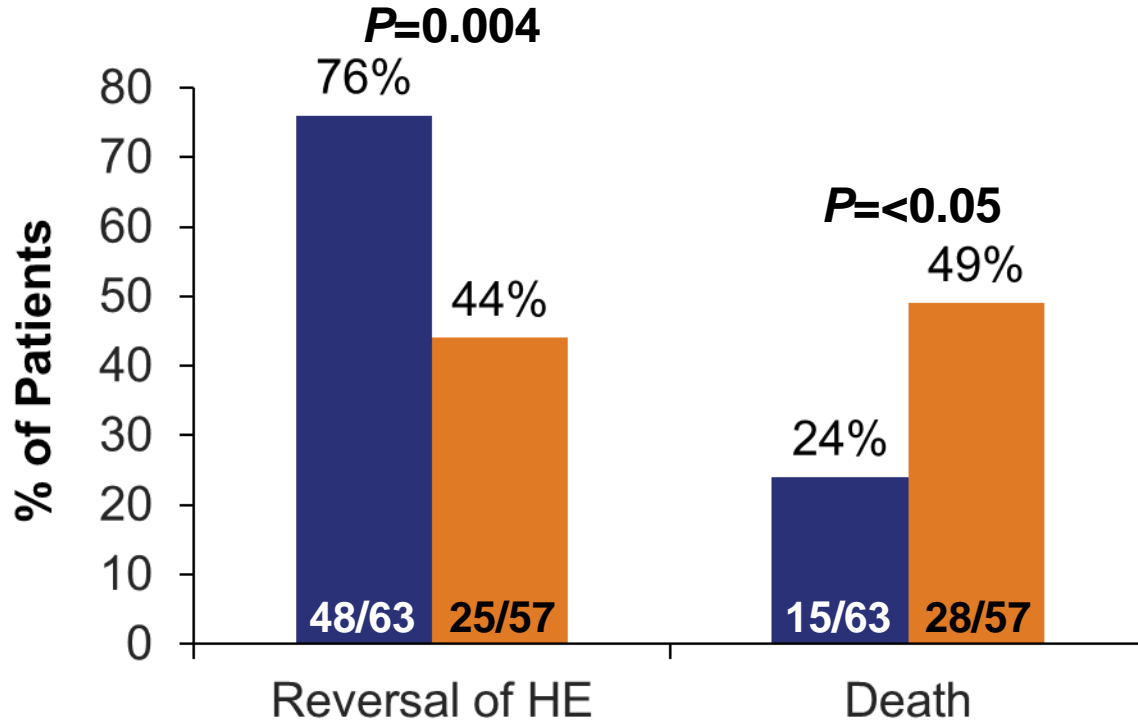


**Lactulose (30-60 mL TID) +
Rifaximin (one 400 mg capsule TID)
n=63 (10 grade 2, 20 grade 3, 33 grade 4)**



**Lactulose (30-60 mL TID) +
Placebo (one sugar capsule TID)
n=57 (12 grade 2, 20 grade 3, 25 grade 4)**

Treatment Approach for Episodic OHE: Lactulose + Rifaximin vs. Lactulose



■ Lactulose + Rifaximin
■ Lactulose + Placebo

- Given via nasogastric tube until recovery of HE or a maximum of 10 days
- Hospital stay was shorter with Lactulose+ Rifaximin than with Lactulose + Pbo (5.8 ± 3.4 vs. 8.2 ± 4.6 days, $P=0.001$)

Summary

- Cirrhosis is increasing in prevalence in the U.S. and recognition with accurate diagnosis is critical for patient care
- Histologic or clinical diagnosis
- Be familiar with the various staging and prognostic tools: MELD, CTP, Baveno
 - Recognize the clinical importance of transition from compensated to decompensated cirrhosis
- HE is a frequent complication of cirrhosis
 - Familiarize yourself with new guidelines for its diagnosis, classification, and treatment