

Hepatic Encephalopathy

alteration in mental status and cognitive function
occurring in the presence of liver failure

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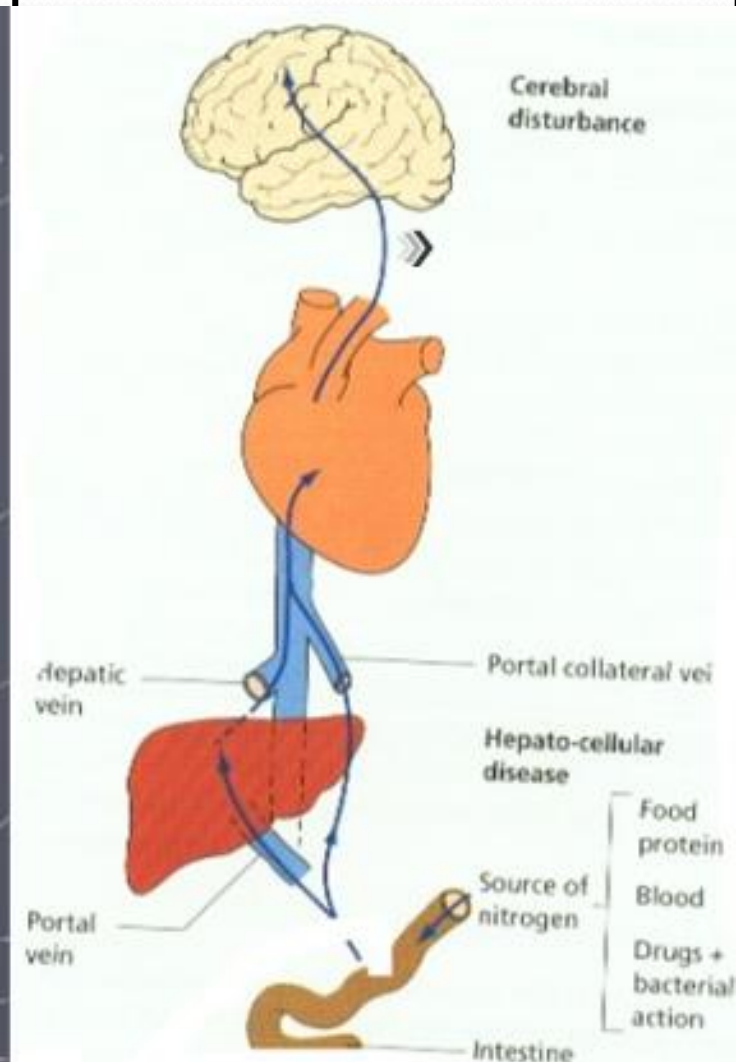
- **Pathophysiology:** Gut-derived neurotoxins that are not removed by the liver because of vascular shunting and decreased hepatic mass get to the brain and cause the symptoms that we know of as hepatic encephalopathy

Neurotoxins:

- Ammonia
- GABA
- Short chain fatty acids
- Benzodiazepine like compounds
- false neurotransmitters
- mercaptans

precipitating events :

- increased dietary protein load
- Infection
- electrolyte disturbances
- GI bleeding
- Dehydration



Clinical features

- Disturbance in higher neurologic function
- Disturbance in neuromuscular function
- Rarely- Parkinson like syndrome and progressive paraplegia

staging

שלב	ביטוי קליני
I	אפאתיה
	חוסר מנוחה
	היפוך מחזור השינה
	אינטלקט מואט
	יכולת חישובית מופחתת
	כתיבה פגועה
II	לתרגיה
	עייפות
	דיס-אוריינטציה
	אסטריקסיס
III	סטופור (שניתן להעירו)
	רפלקסים היפראקטיביים, תגובות פלנטריות
	אקסטנסוריות
IV	תרדמת (תגובה לגירוי כואב בלבד)

Recognizing asterix
In asterix, the patient's wrists and fingers are observed to "flap" because of a brief, rapid relaxation of wrist dorsiflexion.



Complication: Cerebral herniation caused by brain edema associated with swelling of the gray matter

treatment

- Management of participating factors
- replacing animal-based protein with vegetable-based protein
- Lactulose
- neomycin and metronidazole, rifaximin
- Zinc