

# Hepatic encephalopathy

**Hepatic encephalopathy** is a **set of reversible neuropsychiatric symptoms**. It occurs in **acute liver failure**, in which the liver cells die and thus the liver detoxification function is impaired. Hepatic encephalopathy also occurs in **chronic liver disease**, most often in **liver cirrhosis**. The cause of hepatic encephalopathy is an **increased concentration of substances** normally metabolized by the liver, which inhibit nerve transmission in the CNS. It is primarily a change in transmission on **GABA** receptors. These substances are, for example , **ammonia, neurosteroids, glutamine, phenols, mercaptans**.

## Clinical signs

There are **4 stages**

1. In the first stage, the patient is slightly confused, sleep and behavior disorders appear .
2. In the second stage, personality and thinking disorders are present.
3. In the third stage, the patient experiences somnolence and disorientation.
4. The fourth and final stage is defined by **coma**.

Specific symptoms are **flapping tremor** and **foetor hepaticus**.

## Diagnostics

It includes a laboratory examination, during which we look for increased ammonia, which is a high level of ammonia in the blood.

We also carry out auxiliary examinations:

- number connection test (latency when connecting scattered numbers according to sequence),
- constructional apraxia (e.g. cannot draw a star),
- EEG , evoked potentials (ocular, auditory, cognitive),
- CT or MRI of the brain are important in the differential diagnosis.

## Differential diagnosis

- Alcoholism (withdrawal syndrome, delirium tremens),
- Wilson's disease .

## Treatment

The ideal treatment is a **liver transplant** , because after its implementation, the changes in the body are usually fully reversible. It is also possible **to limit protein intake** and **administer lactulose** or lactitol, which are used to cause osmotic diarrhea. ATBs are also administered **against intestinal microflora** , which will reduce the amount of ammonia produced by intestinal bacteria. For example, *rifaximin* is used , which acts only on the intestinal microflora and does not have a systemic effect and associated systemic side effects.

## Links

### Related Articles

- - Liver failure
  - Liver cirrhosis

### Zdroj

- PASTOR, Jan. *Langenbeck's medical web page* [online]. [cit. 2010]. <<http://langenbeck.webs.com>>.