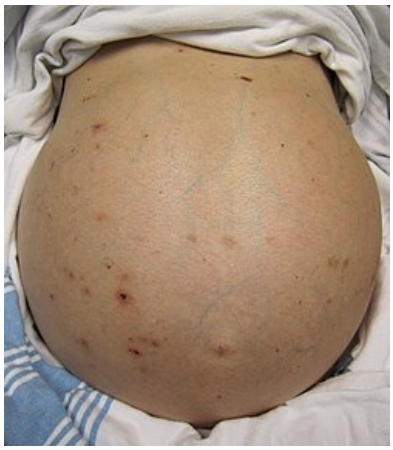
Hepatorenal Syndrome

Hepatorenal syndrome is functional kidney failure in liver disease with portal hypertension. It occurs almost exclusively in patients with ascites.

Etiology and pathogenesis



Liver failure with portal hypertension and ascites

The basis is systemic **circulatory changes** in portal hypertension.

- Renal arterial vasoconstriction (with cortical hypoperfusion) + damage to kidney functions,
- the basis is systemic circulatory changes in portal hypertension (↓ peripheral vascular resistance, central hypovolemia, sympathetic activation).

Clinical picture

- **Type I** – rapidly progressive, 2x ↑ serum creatinine within 2 weeks, prognosis is very poor,
- **type II** – slowly progressing, renal insufficiency occurs slowly + condition relatively stabilized.

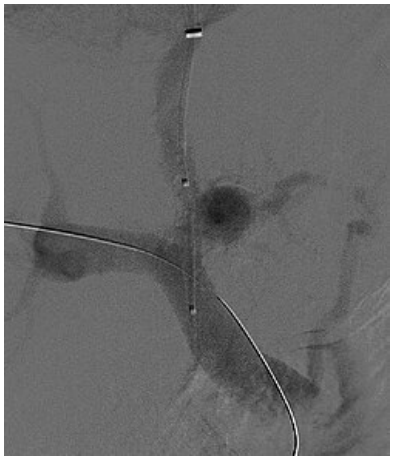
Diagnostics

There is **no specific test** that can diagnose hepatorenal syndrome. Glomerular filtration is usually < 0.66 ml/s (40 ml/min), serum creatinine > 135 µmol/l, sodium in urine < 10 mmol/l, urine osmolality > plasma.

Differential diagnosis

- Organic kidney damage (ATN, etc.).

Terapy



TIPS (transjugular intrahepatic portosystemic shunt)

- Exclusions: nephrotoxic drugs, diuretics, nonsteroidal antiphlogistics,
- treat bacterial infection, rule out bleeding in the gastrointestinal tract,
- correction of hypovolemia (albumin, terlipressin),
- TIPS (days to weeks apart,
- liver transplant.

Links

Related articles

- Portal hypertension
- Consequences of portal hypertension
- Ascites
- Spontaneous bacterial peritonitis

References

- DÍTĚ, P.. *Vnitřní lékařství.* 2. edition. Galén, 2007. ISBN 978-80-7262-496-6.