CytoSorb®

Best practice flowchart
liver dysfunction

Therapy goal

Support of liver function (bridge to recovery) through:

- Rapid reduction of liver toxins including bilirubin
- Attenuation of hyperinflammation

Stop of further deterioration while bridging to transplant

Patient selection

- Bilirubin > 10 mg/dl (> 170 µmol/l)
- Hepatic encephalopathy (HE) grade≥ 2
- Acute Liver Failure or Acute-on-Chronic Liver Failure grade 2-3
- Concomitant vasoplegic shock not responding to standard therapy (best to be used within first 24 hrs.)
- Onset of liver failure after surgery or transplantation
- Intractable pruritus

Timing

Integrate CytoSorb® in hemoperfusion, Continuous Renal Replacement Therapy (CRRT) or ECMO

Dosing

Consider changing the adsorber after 8 hours until suficient stabilization / clinical improvement is seen

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Best practice flowchart liver dysfunction

Ongoing liver dysfunction
without irreversible organ damage

Re-Evaluation
at regular intervals

Standard therapy
continuation

Potential criteria to decide on CytoSorb®

- Bilirubin ≥ 10 mg/dl (170 µmol/l)
- Hepatic encephalopathy (HE) grade ≥ 2
- Refractory septic / vasoplegic shock
- Signs of hyperinflammatory response (PCT† > 3µg/l, CRP‡ > 100 mg/l)

†Procalcitonin
‡C-reactive protein

NO

Integrate CytoSorb®

- Hemoperfusion
- CRRT
- ECMO

Consider complex coagulation status **

BEGIN CytoSorb®



8 hrs.*

2nd Adsorber



8 hrs.*

3rd Adsorber



8 hrs.*

Signs of sufficient clinical stabilization e.g.

- Bilirubin < 8 mg/dl (136 µmol/l)
- Significant improvement in HE
- Shock reversal
- Control of hyperinflammation

YES

STOP CytoSorb®

NO

New Adsorber



12-24 hrs. *

* Depending on the individual's clinical course (e.g. persistent pronounced reduction in bilirubin levels) it may be possible to deviate from the indicated times to longer intervals or even terminate the therapy earlier. If feasible, please consider consecutive pre- and post-adsorber blood sampling as aid for assessing saturation of the adsorber. Sufficient control of the underlying cause is a prerequisite for therapeutic success.

** Anticoagulation must be carefully implemented. Do not rely solely on PT or INR values.

Learn more in detail
cyto.zone/setup

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This decision guidance is non-binding and cannot replace the therapy decisions of the treating physician, who is in all cases responsible for the development and implementation of an adequate diagnostic and therapeutic plan for each individual patient. This chart is based on clinical data and best practice gained with CytoSorb® 300 and not transferable to any other blood purification device. CytoSorb® should only be administered by personnel who have been properly trained in administration of extracorporeal therapies. CytoSorb® is not available for commercial sale in USA. CytoSorb® and CytoSorbents are trademarks of the CytoSorbents Corporation, USA.
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