Fatal acute liver failure in a neonate with disseminated type 2 herpes simplex infection

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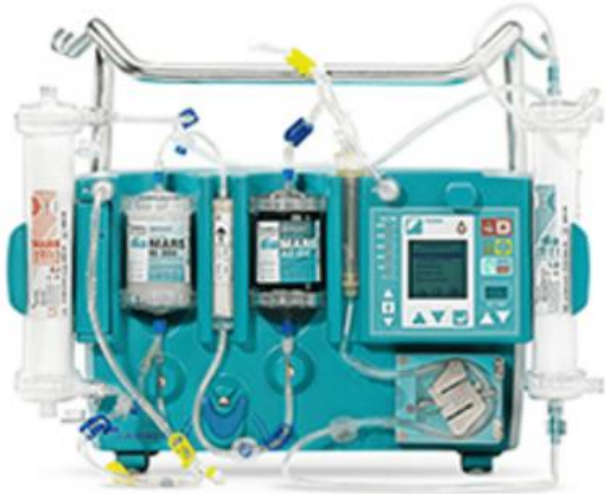
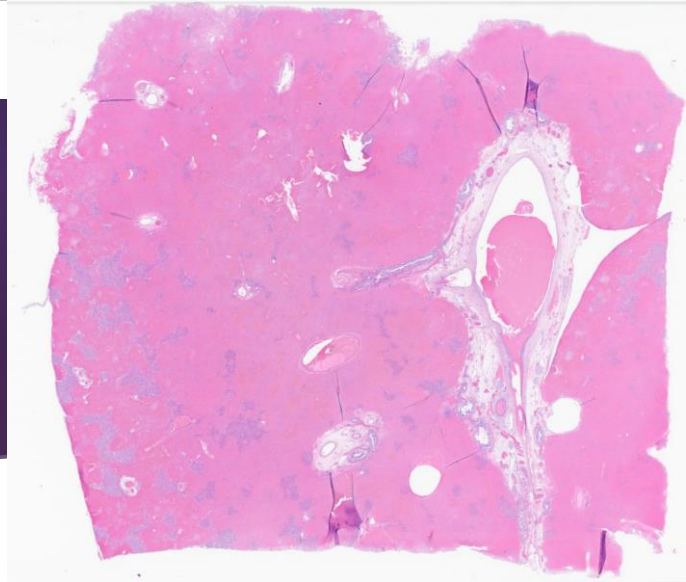
- 4G4P mother, vaginal delivery, uneventful pregnancy
- Good adaptation, discharged on 2nd day of life (DoL)
- 4 DoL: apneas, respiratory distress and hemodynamic instability
- Admitted to PICU with suspected late-onset-sepsis → intubation and inotropic support
- Amoxicillin, gentamycin and ceftazidime
- +acyclovir the next day for elevated liver enzymes and no clinical improvement

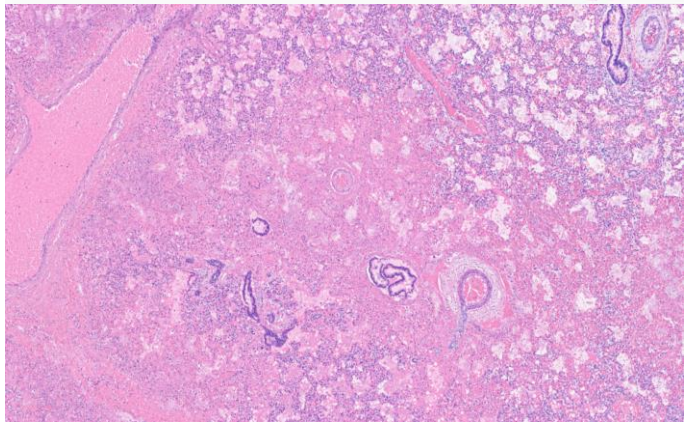
DoL 6-7: deterioration



- Bilateral pleural effusions requiring drainage
- Acute liver failure (ALF) with multiple organ failure → referral to liver transplant center
- Molecular adsorbent recirculation system (MARS) therapy was started
  - hypothermia and progressive bradycardia requiring cardiopulmonary resuscitation.
- Massive pulmonary haemorrhage + severe hypoxemia → massive transfusion and HFO ventilation.
- Refractory respiratory failure after relapse pulmonary haemorrhage on DoL7→ †
- Autopsy → widespread necrosis of lungs, liver, adrenal glands with positive immunostaining for HSV-2 and high load of HSV 2 DNA in blood and pleural fluid

Discussion





- Disseminated neonatal HSV infection
  - rare but severe form of neonatal herpes
  - progressive multiple organ failure and high mortality rates.
- Management of ALF caused by HSV
  - complicated
  - challenging central line insertions
  - high risk of hemodynamic instability and hypothermia
- Guidelines for management of neonatal ALF should be established
  - liver transplant referral criteria
  - indications initiation of extracorporeal therapies (continuous renal replacement therapy, plasmapheresis, MARS)

Thank you for your attention!