A neonatal case of myocarditis associated with Campylobacter jejuni enteritis.

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Background

- Campylobacter Jejuni infection:
  - Incidence ±1%
  - Self-limiting after 1 week
  - Clinical presentation: bloody diarrhea, fever, abdominal cramps
  - Bacteraemia <1%
  - Transmission through contaminated food and water

- Campylobacter Jejuni myocarditis:
  - 0.4% in adults, non reported in children
  - Mostly young male adults
  - Time to onset 2-4 days after start of bloody stool → direct invasion of bacteria/toxins
  - Moderate symptoms, recovery < 1 month

Case

- Presentation:
  - 3 week old term, previous healthy, neonate
  - Bloody diarrhea since 6 days without fever
  - Tachypnoea + feeding difficulties → develops cardiorespiratory arrest at the emergency unit requiring ALS

- Diagnosis of bacterial myocarditis:
  - Signs of heart failure
  - Left ventricle dilatation & arrhythmia
  - Leucocytosis
  - Blood culture: Campylobacter Jejuni

- Therapy & evolution:
  - Cardiac relapse after reduction of inotropic treatment
  - 2 months continuous need of high dose inotropic treatment without increase in cardiac function
  - Long-term high dose intravenous antibiotics
  - 40 days upon admission: IV Immunoglobulins at 1g/kg/day during 3 days
  - Successful weaning of inotropic support over 3 weeks

- Long term follow up:
  - Complete recovery of cardiac function after 1 year

Conclusion

- Pathophysiology of myocarditis caused by Campylobacter Jejuni is unclear:
  1. Suggested initial direct invasion of Campylobacter Jejuni in the myocardium one week after onset of diarrhea → Our choice for prolonged aggressive antibiotic treatment
  2. Relapse with continuous need of inotropic support, possible immune mediated → Additional immunoglobulin treatment although benefit not proven for viral or bacterial myocarditis
     Our patient recovered gradually after the administration of immunoglobulin. Natural disease course cannot be excluded.

- Despite prolonged inotropic support, complete recovery occurred.