Neonate with suspected or definite NEC

- Clinical assessment
- Cultures (Blood, urine), CBC, CRP
- Abdominal X-rays
- Other clinically directed evaluation
- Review prior cultures and antibiotic use*

Stage | Classification | Systemic Signs | Abdominal Signs | Radiographic Signs
---|---|---|---|---
IA | Suspected | Temperature instability, apnea, bradycardia, lethargy | Gastric retention, abdominal distention, emesis, heme-positive stool | Normal or intestinal dilation, mild ileus
IB | Suspected | Same as above | Grossly bloody stool | Same as above
IIA | Definite | Mildly ill | Same as above plus absent bowel sounds +/- abdominal tenderness | Intestinal dilation, ileus, pneumatosis intestinalis
IIB | Definite | Moderately ill | Above plus mild metabolic acidosis and thrombocytopenia | Same as IIA + portal venous gas +/- ascites
IIIA | Advanced | Severely ill | Same as IIB plus hypotension, severe apnea, combined respiratory and metabolic acidosis, DIC, neutropenia | Same as IIB + portal venous gas + definite ascites
IIIB | Advanced | Severely ill | Same as IIIA | Same as IIIA + pneumoperitoneum

**Spontaneous Intestinal Perforation** is a distinct entity from necrotizing enterocolitis
- Antibiotic therapy including anaerobic coverage: **Cefazolin + Gentamicin + Metronidazole**
- Treat for minimum of 7 days and reassess

**Duration of Bowel Rest:**
- NPO for duration of antibiotic therapy.
- Duration of bowel rest may be longer than duration of antibiotic therapy depending on clinical assessment of patient’s feeding readiness, as evaluated by neonatology and surgical team.

- If cultures from blood or other sterile site(s) are positive, therapy should be targeted to treat the isolated organism(s).
- **If significant antibiotic exposure or history of multidrug-resistant organism consult ID and consider alternative antibiotic therapy
- **If renal impairment or oliguria, consider alternative therapy

- Cefazolin + gentamicin**
  Duration based on suspicion and clinical progression of infection

- Cefazolin + Gentamicin + Metronidazole**
  Duration of Antibiotic Therapy:
  - Monitor clinical signs (abdominal exam, blood in stool, hypotension), laboratory markers (WBC, acidosis, thrombocytopenia), radiographic findings (pneumatosis, dilated loops).
  - Minimum duration of 7 days for definite NEC and then reassess

- Piperacillin / tazobactam (Zosyn)


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Publication Date: January 2019