PYLORIC STENOSIS

Population:
- Infants: onset between 2-5 weeks of age
- 1 in 250 births
- Male: female ratio 4:1
- Familial incidence

History:
- No vomiting in the first few weeks of life
- Initially vomiting occurs at the end of meals or within 30 minutes
- Infants appears hungry
- Nonbilious vomiting continues and progresses to become more prominent (“projectile”)
- Hematemesis may be seen
- Failure to thrive

Physical Examination:
- General appearance and vital signs
- Rapid cardiopulmonary assessment
- Assessment of hydration
  - Well hydrated
  - Mild, moderate or severe dehydration
- Abdominal examination (classic but rare findings)
  - Presence of peristaltic gastric wave (left to right)
  - Palpable “pyloric olive”

Diagnostic Evaluation:
- ER 1
- U/A

Therapeutic Management:
- NPO
- NG tube
- Bolus 20cc/kg NS if appears dehydrated, then 1.5-2x maintenance D5NS (1800-2400cc/m²/d)

Radiographic Studies
- Ultrasound
- Upper GI series if ultrasound is inconclusive and/or to evaluate for GE reflux or malrotation

Disposition
- Notify Pediatric Surgery Service
- Fluid therapy to correct any electrolyte abnormalities
- Admission
MALROTATION WITH VOLVULUS

Population:
- Any age
- Peak incidence in first month of life
  - 40% in first week of life
  - 75% in first year of life
- Male: female ratio 2:1 (up to 1 years old)

History:
- Presentations:
  - Sudden onset of bilious vomiting (with or without abdominal pain)
  - “Feeding problems” in the past and now with bilious vomiting
  - Failure to thrive with severe feeding intolerance
- Uncommon: hematemesis and rectal bleeding

Physical Examination:
- General appearance and vital signs
- Rapid cardiopulmonary assessment
  - Shock
- Assessment of hydration
  - Mild, moderate or severe dehydration
- Abdominal examination
  - Mild distension
  - Dilated bowel loops
  - Diffusely tender
- Rectal examination:
  - Guaiac positive or gross blood may be present

Laboratory Evaluation:
- ER 1, CBC, U/A

Therapeutic Management & Imaging:
- NPO
- IV access
- Bolus 20cc/kg NS if appears dehydrated, then 1.5-2x maintenance D5NS (1800-2400cc/m²/d)
- NG tube placement
- Order UGI series (conventional radiograph will be included with the UGI)
- Notify Pediatric Surgery Service concurrent with ordering studies
- Operative intervention and admission
INTUSSUSCEPTION

Population:
- 3 months to 5 years of age
  - 60% in first year of life
  - peak incidence 6-11 months of age
- Usually related to “viral” enlargement of lymph nodes; pathologic lead point more likely in older children
- Male predominance

History:
- Sudden onset of episodic crampy or colicky abdominal pain
  - Child cries and may draw up knees towards the chest
  - Episodes may become more frequent
- Classic triad of colicky abdominal pain, vomiting and bloody mucous stools (“currant jelly”) occurs ~ 20-40%
  - Two of the above findings found ~ 60% of cases
- Vomiting may be bilious
- Neurologic Variation: Altered mental status primary presentation
  - Lethargy
  - Unresponsiveness

Physical Examination:
- General appearance and vital signs
- Rapid cardiopulmonary assessment
  - Shock
- Assessment of hydration
- Abdominal examination
  - Pain out of proportion to the physical exam
  - Distention and tenderness
  - Right upper or lower quadrant mass (uncommon)
- Rectal examination:
  - No blood vs. occult blood vs. gross blood

Laboratory Evaluation:
- ER 1, CBC, type and cross

Therapeutic Management & Imaging:
- NPO
- IV access
- Bolus 20cc/kg NS if appears dehydrated, then 1.5-2x maintenance D5NS (1800-2400cc/m²/d)
- NG tube placement
- Order ultrasound and BE (barium enema)
  - BE will be performed if ultrasound demonstrates intussusception
- Notify Pediatric Surgery Service concurrently with ordering studies
- Operative reduction if not reduced by barium enema
REFERENCES:


DISCLAIMER:
This clinical guideline has been developed for the purpose of unifying the general emergency care of children with vomiting with and without abdominal pain. It is intended to aid, rather than substitute for, professional judgment. It is not intended to serve as a rigid protocol or a written proxy for the standard of care. Failure to comply with this guideline does not represent a breach of the standard of care.
**Consult Pediatric Surgery**

**BILIOUS**
- NPO
- IVF and labs
- NG tube

**Order UGI series**
Send requisition Mon-Fri 8:30A-4:30PM to station #810; from 4PM-5PM Mon-Fri, call 2-6600 and radiologist at 5-1889 or 5-2053 to verify Page Rads ROC (188-7046) during other times

**Infant < 3 months**

**NON-BILIOUS**
- projectile

- NPO
- IVF and labs
- NG tube

**Order ULTRASOUND †**
Send requisition Mon-Fri 8:30A-4:30PM to station #810; from 4PM-5PM Mon-Fri, call 2-6600 and radiologist at 5-1889 or 5-2053 to verify Page Rads ROC (188-7046) during other times

**Consult Pediatric Surgery**
if pyloric stenosis found

**Pediatric Surgery consultation occurs concurrently with ordering radiological studies and DOES NOT need to be done prior to ordering radiological studies**

**Consult Pediatric Surgery first if suspicion for peritonitis**

† Obstructive series (2view abd) may be useful as a screening tool but is not required prior to ultrasound if there is high index of suspicion
**PEDIATRIC EMERGENCY DEPARTMENT CLINICAL GUIDELINE: PEDIATRIC SURGICAL EMERGENCIES: VOMITING**

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**BILIOUS**

- Child 3 mos - 3 years
  
  **Bilious?**

  - **yes**
    - NPO
    - IVF and labs
    - NG tube
    
    **Consult Pediatric Surgery**

  - **no**
    
  **NON-BILIOUS**

  - episodic, crampy and/or colicky pain?
  - lethargy?

  **Consult Pediatric Surgery**

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**Order UGI series and US**

(US will be done if UGI negative)

Send requisition **Mon-Fri 8:30A-4:30PM** to station #810; from **4PM-5PM Mon-Fri**, call 2-6600 and radiologist at 5-1889 or 5-2053 to verify

Page Rads ROC (188-7046) during other times

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**Order US† and BE**

(BE will be done if positive ultrasound)

Send requisition **Mon-Fri 8:30A-4:30PM** to station #810; from **4PM-5PM Mon-Fri**, call 2-6600 and radiologist at 5-1889 or 5-2053 to verify

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REVISED 12/11/06
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PEDiatric SURGICAL EMERGENCIES: VOMITING

REVISED
12/11/06