## Hypertrophic Pyloric Stenosis / Pyloromyotomy Care Guideline Incorporating ERAS Principles

**Inclusion Criteria:** Children < 3 months of age with projectile and/or frequent episodes of non-bilious emesis, ultrasound at CHOC confirms pyloric stenosis

**Exclusion Criteria:** Suspected sepsis, bilious vomiting suggesting intestinal obstruction, presence of significant comorbidities or chronic conditions which would alter the approach to care

#### Preoperative History, Diagnosis, and Interventions

- · Obtain pyloric ultrasound (US Pylorus) and Basic Metabolic Panel
  - o If US positive without fluid passing through pylorus, admit to Pediatric Surgery.
  - o Obtain peripheral IV access as soon as possible
  - o Make patient NPO and start D5NS at 1.5x maintenance rate.
  - o Review BMP results
    - Fluid resuscitate per the below algorithm
- · Correct electrolytes, if abnormal
  - o Targets: Potassium (K<sup>+</sup>) ≥ 3, Chloride (Cl) ≥ 100, Bicarbonate (HCO<sub>3</sub>) ≤ 30
- To OR for pyloromyotomy once electrolytes are balanced and infant is adequately fluid resuscitated
- Integrate ERAS principles:
  - Educate patient and family on operative procedure, post-operative care, including appropriate expectation of post-operative care and discharge criteria
  - o Patient and family education materials are distributed to the family

#### **Postoperative Assessment**

- Vital signs q1h x 2, then Q4h per floor routine
- Strict I/O
- Apnea monitor
- Pain Assessment and Management (Refer to Patient Care Policy F918)

#### **Postoperative Interventions**

- Integrate ERAS principles:
  - o Feeding ad lib once recovered from anesthesia
  - o IVF D5NS+20mEq KCI
  - o Do not hold feeds for emesis
  - o Saline Lock IV once tolerates 2 feeds at goal volume
  - $\circ\,$  Notify MD for > 3 large emesis or UOP < 1mL/kg/hr over 6hr
  - o Pain management with acetaminophen 15mg/kg PO or PR rectal q4h PRN pain
  - o Age-appropriate activity as tolerated

#### **Discharge Criteria**

- VS stable, afebrile x 24h
- Tolerating breast milk or formula feeds (max 60mL)
   x 3 feedings and clinically hydrated without IV fluids
- Abdomen soft and non-distended, without significant tenderness
- Pain well controlled with PO or PR acetaminophen



#### Information/Recommendations/ Considerations

- Hypertrophic pyloric stenosis (HPS) is one of the most common gastrointestinal disorders during early infancy, with the incidence of 1:1000 live births; most common between the ages of 3 and 6 weeks of life, but can occur as soon as 2 weeks of life and up to 12 weeks of life.
- Hypertrophy of the circular muscle of the pylorus results in constriction and obstruction of the gastric outlet.
- Gastric outlet obstruction leads to nonbilious, projectile emesis, loss of hydrochloric acid with the development of hyperchloremic & hypokalemic metabolic alkalosis, dehydration and possible hyperbilirubinemia.
- Preoperative intervention includes IV fluid resuscitation and electrolyte repletion.
- Surgical myotomy is the primary approach to the-treatment of HPS.
- Morphine should be avoided in this
  patient population. If pain is inadequately
  controlled by acetaminophen, patient
  should be assessed by provider prior to
  prescribing morphine.
- Patients with persistent post-op vomiting will be managed on an individualized hasis
- If patient continues to have emesis beyond postoperative day one, consider starting famotidine.
- DO NOT place NG tube in patients status post pyloromyotomy.

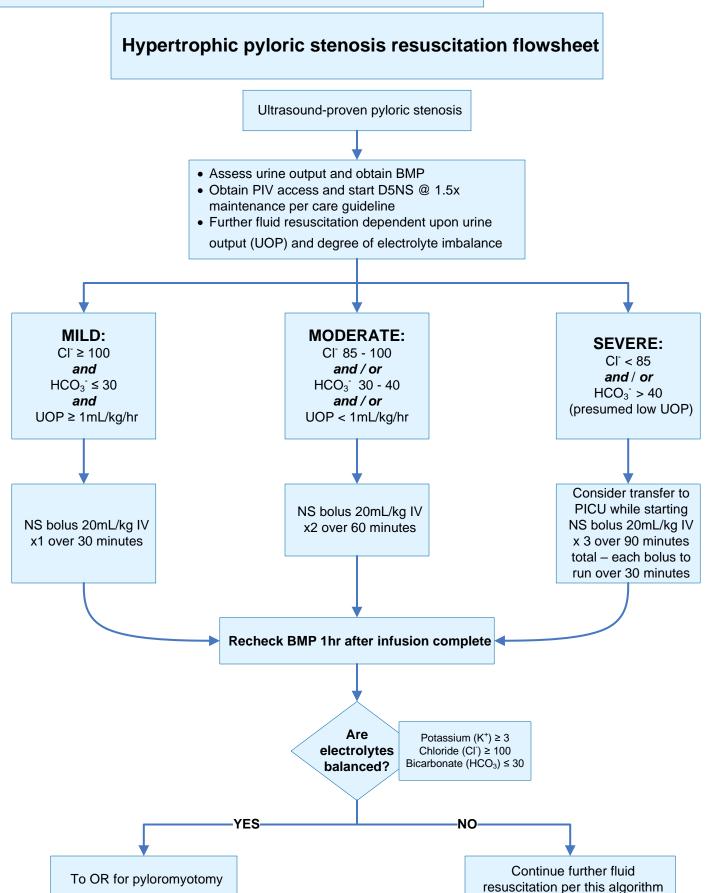
#### **Patient Education**

 Pyloric Stenosis Handout located on PAWS in Patient and Family Education



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