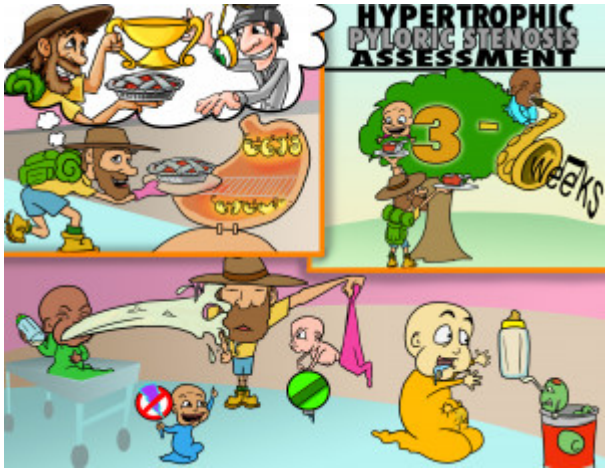
Hypertrophic Pyloric Stenosis (HPS) Assessment

Hypertrophic Pyloric Stenosis is a condition found in newborns and occurs when the circumferential muscle of the pyloric sphincter becomes thickened, resulting in elongation and narrowing of the pyloric canal producing an outlet obstruction, dilation, along with hypertrophy and increased peristalsis of the stomach. This typically occurs at 3-6 weeks of age in infants. They display projectile vomiting after feeding, with little to no pain or discomfort. Patients display weight loss, dehydration, and an olive mass on physical exam.



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Mechanism

Hypertrophied Pylorus
Hiker-trophy with Pylorus-pie
With HPS, there is hypertrophy of the circular muscles of the pylorus. This causes narrowing of the pyloric canal, which is the path between the stomach and duodenum.

Risk Factor

Macrolide Use
Macaroni-lights
There is a link between macrolide therapy and the development of hypertrophic pyloric stenosis in infants. HPS can develop from macrolide treatment in infants, along with mothers who received the medication in late pregnancy. Thus, macrolides should be used in pregnancy and infants only if the potential treatment benefits outweigh the risk of HPS.

Assessment

3-6 Weeks of Age
(3) Tree to (6) Sax Infants
The typical presentation of HPS is between 3-6 weeks of age for full-term infants. This is not often seen in premature-birth children.

Projectile Vomiting After Feeding
Projectile Vomit after Bottle
Infants with HPS will have nonbloody, nonbilious, projectile vomiting. Over several days it becomes more predictable, occurring at nearly every feeding. This can lead to metabolic alkalosis in the patient. Furthermore, peristaltic waves are visible from the left to right across the epigastrium during or right after feeding.

No Pain or Discomfort
Laughing with No Pain-bolt sign
Children are typically calm, and do not show any physical signs of pain or discomfort from their condition.

Weight Loss
Skinny with Baggy-pants
Due to their inability to transport gastric contents beyond the stomach, these children are malnourished and quickly develop weight loss.

Dehydration
Empty-canteen
Furthermore, these children become dehydrated, as the fluids they take orally are unable to be transported past the pylorus of the stomach into the duodenum.

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Hungry Baby

Baby wants Bottle

These children exhibit hunger and irritability, simply because they are regurgitating their feedings. Usually, a child with HPS will want to feed right after vomiting since little to no food is passing through the pylorus from the stomach into the duodenum.

Olive Mass

Olive Lump

On physical exam, you can feel an olive-shaped mass in the right upper abdominal quadrant. The hypertrophied pylorus is best felt after vomiting or during, or at the end of feeding.

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