VOMITING
VOMITING

Vomiting is a symptom or a common presenting complaint in multitude of illnesses.

There are 3 linked activities

• Nausea

• Retching

• Active expulsion of stomach contents.
DEFINITIONS

• Vomiting - Oral expulsion (retrograde expulsion) of gastric contents.
• Nausea - Subjective feeling of a need to vomit
• Regurgitation - Effortless expulsion of gastric contents
• Rumination - Repeated regurgitation which are usually re-chewed and swallowed.
PHYSIOLOGY OF VOMITING

There are 2 centers in brain

• CTZ the chemo receptor trigger zone
  Bilateral set of neurons in the brain stem lying under the floor of fourth ventricle. They function as chemo receptors sensing chemical abnormalities.

• Central vomiting center
  Situated in the reticular formation of the medulla. They receive signals from CTZ, visceral afferents of GIT, outside GIT like bile duct peritoneum, heart and from extramedullary centers in the brain
VOMITING

The process of vomiting involves three steps

**Pre ejection phase** characterized by nausea increased sympathetic and parasympathetic activity like increased salivation, tachycardia, pallor, deep breathing with gastric relaxation and reverse peristalsis.

**Retching** is characterized by rhythmic action of respiratory and abdominal muscles

**Ejection phase** characterized by intense contraction of abdominal muscles and relaxation of the esophageal sphincters
CAUSES OF VOMITING - NEONATES

Gastrointestinal
- Swallowed blood
- Faulty feeding
- GER
- GI anomalies - Atresia, Stenosis
  Malrotation, Volvulus

Others
- Infections
- Birth asphyxia
- Hydrocephalous
- IEM
CAUSES OF VOMITING - INFANCY

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<th>Gastrointestinal</th>
<th>Others</th>
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<td>• GER</td>
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<td>• Peritonitis</td>
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<td>• Malrotation, volvulus</td>
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## CAUSES OF VOMITING - CHILD

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<td>• GERD</td>
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<td>• Hepatitis</td>
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<td>• Appendicitis, Peritonitis</td>
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APPROACH TO A CHILD WITH VOMITING

HISTORY

• Duration
• Frequency
• Type of vomitus- Food, fluid, blood, bile, Feces
• Smell- poisons
• Associated with nausea or not
• Projectile or non projectile
• Effortless or not
Look for associated symptoms like-

- Loose stools
- Fever
- Respiratory distress
- High colored urine
- Cough
- Abdominal pain
- Headache.
CLINICAL EXAMINATION

Look for

- Signs of dehydration
- Signs of acidosis, Dyselectrolytemias
- Vital compromise, level of consciousness
- Nutritional status

Detailed evaluation of all systems
CONSEQUENCES OF VOMITING

• Dehydration
• Dyselectrolytemias
• Acid base imbalance
• Hypovolemia and shock
• Malnutrition and failure to gain weight
• Aspiration
• Mallory Weiss syndrome
CLINICAL FEATURES IN SPECIFIC CONDITIONS

Gastroenteritis
Vomiting is followed with loose stools.

Intestinal obstructions
Vomiting will be associated with constipation and abdominal distension. Vomiting will be projectile.

Bleeding per rectum in intussusceptions

CNS causes
Will be associated with head ache. Vomiting is non projectile. Early morning head ache with vomiting occur in ICSOL.
TREATMENT

• Often need no treatment since it is a protective mechanism.

• **Find out the cause and treat the cause.**

• Give sips of fluids so that child won’t vomit further.

• Antiemetic like ondansetran can be used in very few occasions like-
  1. Vomiting due to chemotherapy
  2. Motion sickness.
  3. ADD with frequent vomiting which may interfere with oral fluid therapy- a single dose only.
THANK YOU