

PEDIATRIC SURGICAL EMERGENCIES

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DISCLOSURES

I have no relevant relationships with ineligible companies to disclose within the past 24 months.

OBJECTIVES

At the conclusion of this session, participants should be able to:

- Identify common pediatric surgical emergencies that may present to a Primary Care Provider
- Describe the presentation of common emergent surgical conditions
- Discuss the rationale for escalating care to emergency room or surgical evaluation

OVERVIEW

1

MALROTATION WITH VOLVULUS

2

HYPERTROPHIC PYLORIC STENOSIS

3

APPENDICITIS

4

TESTICULAR TORSION

5

INGUINAL HERNIA

MALROTATION WITH VOLVULUS

- Abnormal rotation and fixation of the gut during embryogenesis
- Midgut Volvulus: twisting of small intestine causes small bowel obstruction
- 75% of cases occur in the first 4 weeks of life
- Bilious emesis
- Imaging
 - Ultrasound
 - Upper GI contrast study
- Treatment- Emergent laparotomy

NORMAL

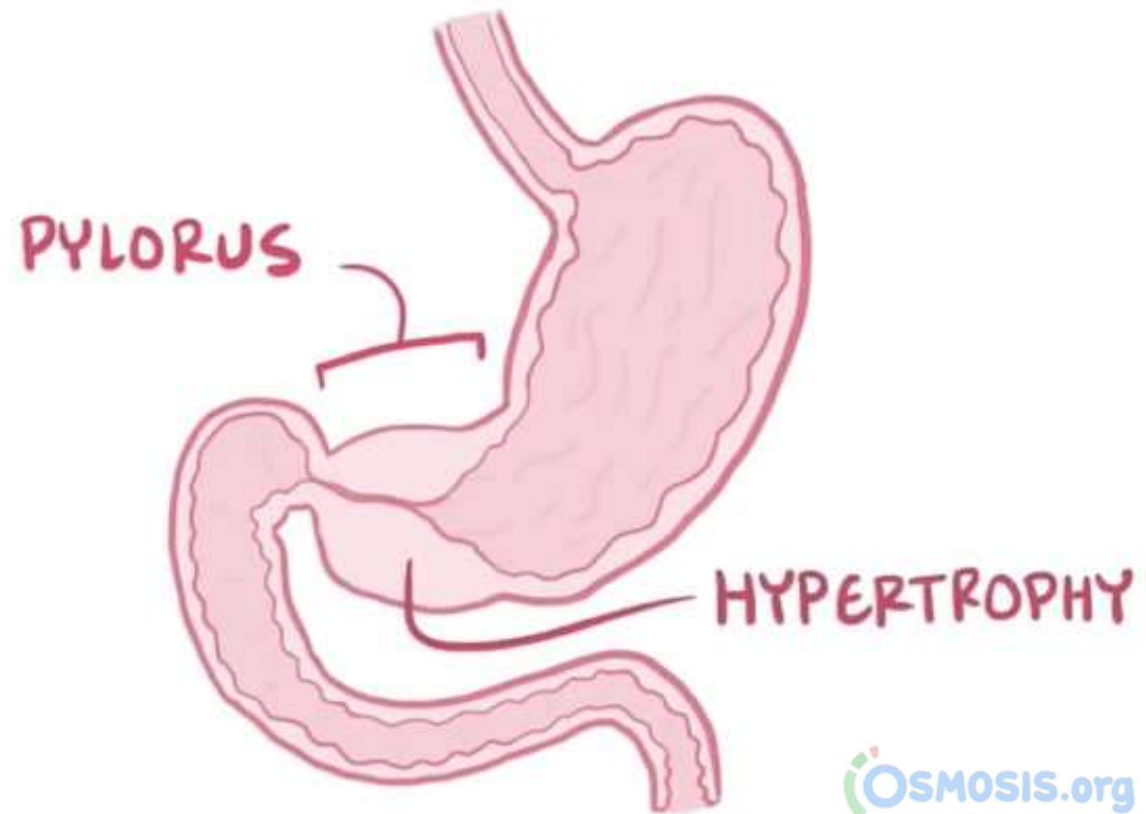


MALROTATION

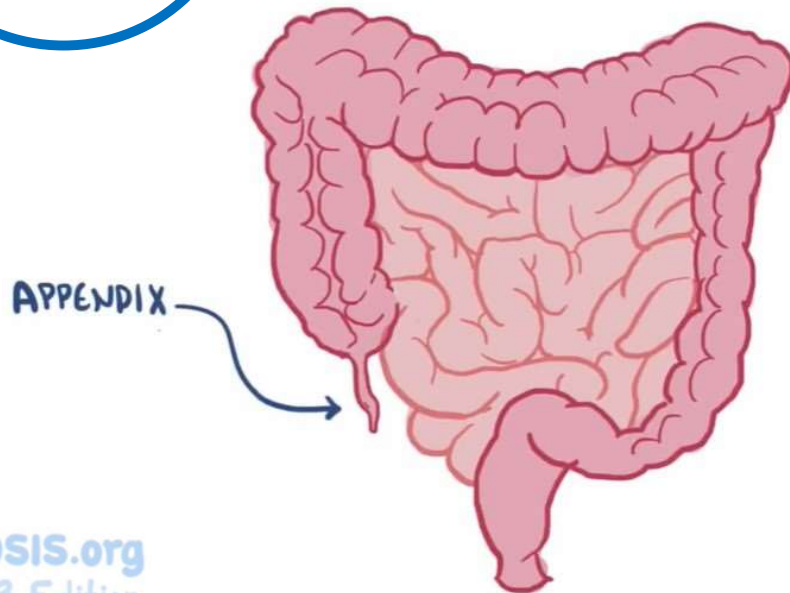


HYPERTROPHIC PYLORIC STENOSIS

- Thickened pylorus
- Commonly 2-6 weeks
- Non-bilious Emesis
- Exam: palpable mass in right upper quadrant
- Ultrasound imaging
- Treatment
 - Stabilize, rehydrate and correct electrolytes
 - Surgical intervention: Pyloromyotomy



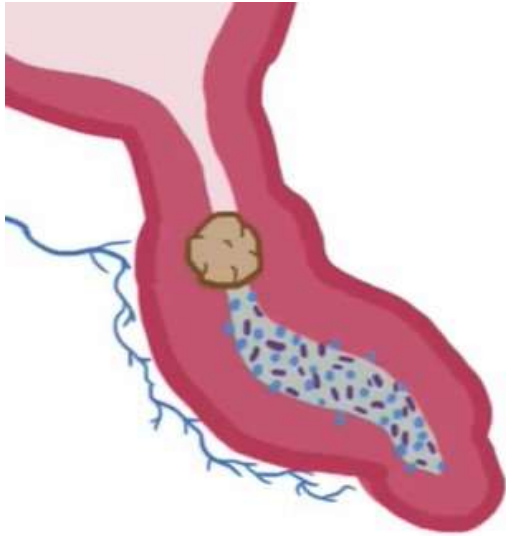
APPENDICITIS



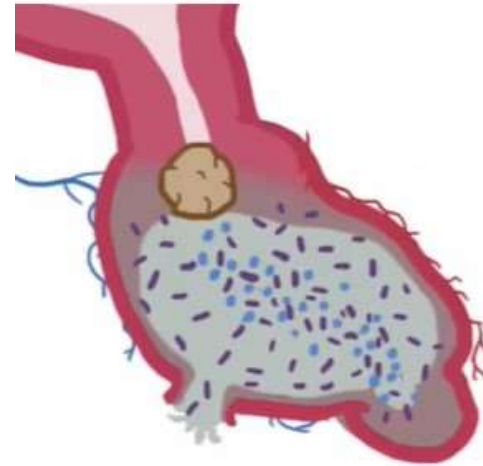
- Inflammation of the appendix
- Diffuse or periumbilical abdominal pain- localizes to the right lower quadrant
- Anorexia, nausea, emesis
- Exam
 - Early: periumbilical or diffuse abdominal tenderness
 - Later: guarding, localized tenderness, rebound tenderness
- Imaging: Ultrasound or CT scan
- Treatment- laparoscopic appendectomy

APPENDICITIS

Simple appendicitis

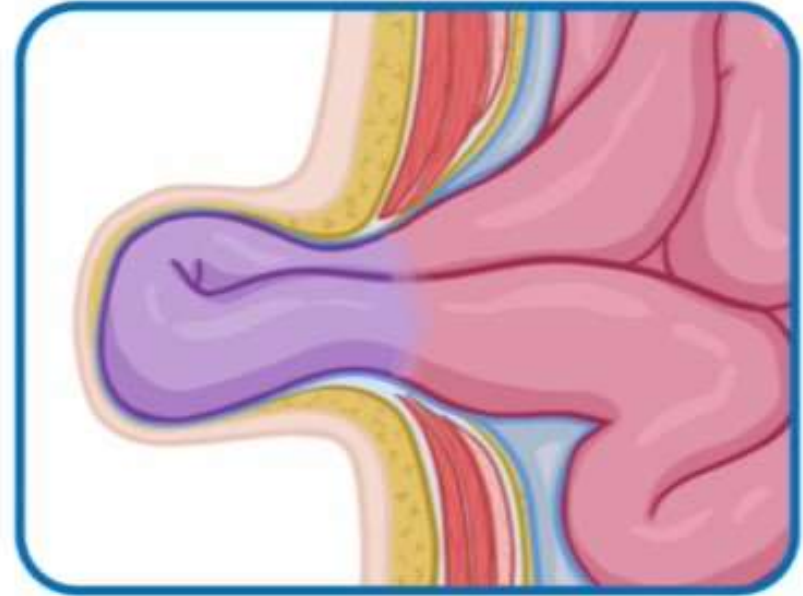


Perforated appendicitis



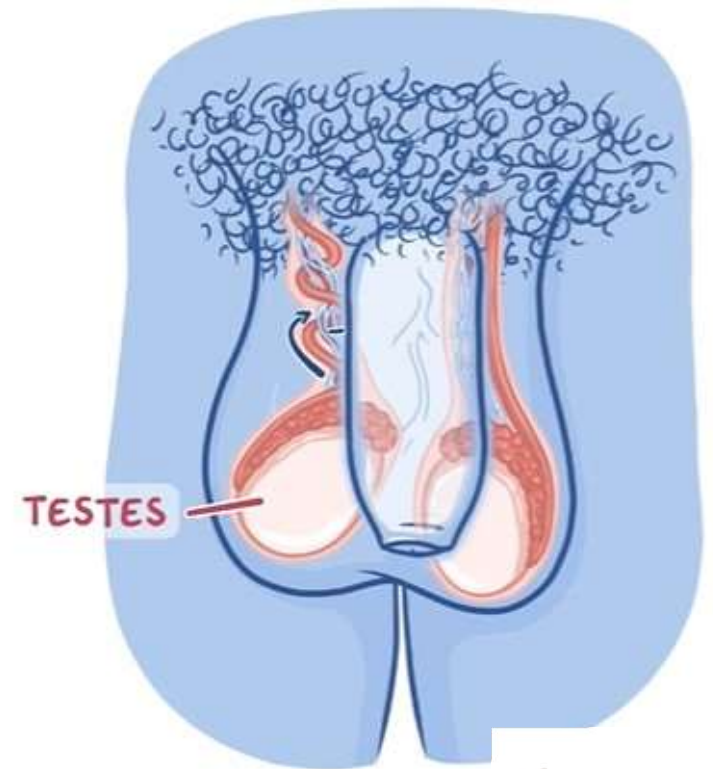
INGUINAL HERNIA

- Protrusion of abdominal contents through the inguinal canal
- Congenital: Process vaginalis fails to close during gestation
- Bulge in the groin or testicle
- Types
 - Reducible: soft and compressible
 - Intermittent symptoms
 - Incarcerated: firm bulge that cannot be pushed back
 - Constant pain, changes in bowel or bladder habits
 - Strangulated: blood supply to the bowel is obstructed
 - Constant severe pain, Symptoms of bowel obstruction
 - Overlying skin changes: warm, erythematous, tender



TESTICULAR TORSION

- Twisting of the spermatic cord leads to vascular compromise
- Congenital abnormality of tunica vaginalis attachment
- Acute onset testicular pain, nausea, emesis
- Spontaneous, traumatic, after intense activity
- Tender Unilateral erythema, edema, high-riding testicle with lack of cremasteric reflex
- Ultrasound: vascularity and structure
- Treatment: Bilateral detorsion and orchidopexy



TAKE HOME POINTS



RESOURCES

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2. Gaillard F, Machang'a K, Murphy A, et al. Intestinal malrotation. Reference article, Radiopaedia.org (Accessed on 29 Nov 2023) <https://doi.org/10.53347/rID-1643>
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4. Schick MA, Sternard BT. Testicular Torsion. [Updated 2023 Jun 12]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK448199/>
5. Osmosis library: <https://www.youtube.com/@osmosis>