A Perf-ect Differential

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Disclosure of Financial Relationships

Husband works as in-house legal counsel at Sanofi
Case Presentation

6 year old boy with a history of constipation presents with 24 hours of abdominal pain

Pain is diffuse and colicky, has periods without pain

Review of Systems

• 2 episodes of NBNB emesis
• Has been having daily soft small bowel movements, no diarrhea
• Tactile fevers, no documented fevers
• Decreased PO but no anorexia
• Sore throat
• No dysuria, rashes, testicular pain, respiratory symptoms
Earlier today...

Initial ED: KUB revealed a “large stool burden”

Enema given which led to a bowel movement with pain relief, so discharged home with diagnosis of constipation

Pain recurred in the ED parking lot, so sent to our ED

PMH: constipation, seen by GI 2 months earlier
PSH: none
Meds: Miralax PRN
Allergies: none
Family: non-contributory
Social: non-contributory
Differential Diagnosis

Constipation
Viral infection
Strep pharyngitis
Intussusception
Appendicitis
Testicular torsion
Nephrolithiasis

Most common/likely:

- Strep pharyngitis

Intussusception
Appendicitis
Testicular torsion
Nephrolithiasis
Differential Diagnosis

Must not miss

- Intussusception
- Appendicitis
- Testicular torsion
- Nephrolithiasis

Fits with symptoms

- Nephrolithiasis
Physical Exam
T 37   HR 108   RR 20   BP 106/59

Differential Diagnosis

Constipation
Viral infection
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Differential Diagnosis

- Constipation
- Viral infection
- Strep pharyngitis
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Workup
Differential Diagnosis

- Constipation
- Viral infection
- Strep pharyngitis
- Intussusception
- Appendicitis
- Testicular torsion
- Nephrolithiasis

Urinalysis: +ketones, negative blood
Differential Diagnosis

Constipation
Viral infection
Strep pharyngitis
**Intussusception**
Appendicitis
Testicular torsion
Nephrolithiasis

Moderate stool burden
Limited exam but no evidence of intussusception, appendix not visualized

Differential Diagnosis

- Constipation
- Viral infection
- Strep pharyngitis
- Intussusception
- Appendicitis
- Testicular torsion
- Nephrolithiasis
Differential Diagnosis

Constipation
Viral infection
Strep pharyngitis
Intussusception
Appendicitis
Testicular torsion
Nephrolithiasis
Differential Diagnosis

**Constipation** – Admit for clean out

- Viral infection
- *Strep* pharyngitis
- Intussusception
- Appendicitis
- Testicular torsion
- Nephrolithiasis
Hospital Course

NG Golytely initiated, started having soft bowel movements

Parents thought pain was possibly improving
Continued with Golytely...
Small questionably blind ending loop of bowel in midline pelvis which appears mildly thickened and associated with adjacent fat stranding and trace amount of free fluid.
Small questionably blind ending loop of bowel in **midline pelvis** which appears mildly thickened and associated with adjacent fat stranding and trace amount of free fluid.
“A probable blind-ending tubular structure off the ileum demonstrating hyperenhancement and wall thickening in the periumbilical region, most consistent with Meckel’s diverticulitis”
Surgical Findings

Meckel’s diverticulum lined by gastric and small intestinal type mucosa with a focal perforation of adjacent small intestinal wall with inflammation

**Final Diagnosis**

Meckel’s diverticulitis with perforation

**Meckel’s Diverticulum**

When symptomatic...
- Bleeding
- Abdominal pain
- Obstruction
- Inflammation/diverticulitis
- Perforation
Meckel’s Diverticulitis

Occurs in 2% of population

Male-to-female ratio of 2:1

Located within 2 feet from ileocecal valve

Can be 2 inches in length

Bleeding Meckel’s lined by 2 different types of mucosa

2% with complication over course of their lives (typically before age 2)
Our Patient

• Post-operative ileus that slowly improved
• Small bowel obstruction secondary to adhesions requiring repeat surgery
• Now doing well 1 year later

Cognitive Biases
Cognitive Biases

6 year old boy with a history of constipation (seen by GI 2 months prior) presents with 24 hours of abdominal pain
Cognitive Biases

- KUBs revealed moderate-large stool burden
- Pain relief with enema

Lessons Learned
Differential Diagnosis

- Constipation
- Viral infection
- Strep pharyngitis
- Intussusception
- Appendicitis
- Testicular torsion
- Nephrolithiasis
- Meckel’s diverticulitis
References

• Javid P and Pauli EM. Meckel’s diverticulum. In: UpToDate, Soybel DI and Heyman MB (Eds), UpToDate, Waltham, MA, 2016.