Abdominal Pain in Children

Dr. Peter Fitzgerald
DIVISION OF PEDIATRIC SURGERY
McMASTER CHILDREN'S HOSPITAL
Abdominal Pain Assessment:

• History
  – Nausea/vomiting/diarrhea
  – nature of the abdominal pain
    • crampy vs steady
    • worse with movement
  – urinary symptoms
  – LMP, sexually active
  – aches/pains, walking, car ride
Abdominal Pain Assessment:

• Physical
  – Vitals, % Dehydration, position of child
  – Throat, Chest assessment
  – Abdomen
    • distended
    • tenderness, rebound
    • guarding - voluntary vs involuntary
    • ‘local findings’
  – Inguinoscrotal exam

***Slow repeated assessments if necessary***
Abdominal Pain Assessment:

- Lab Data
  - CBC
  - Urine
- Abdominal X-ray
  - AXR
  - CXR
  - Selected contrast studies
- Ultrasound
- CT scan
Working diagnosis by site of pain:

- Appendicitis
- Mesenteric adenitis
- Meckel diverticulitis
- Ovarian torsion
- Cholelithiasis
- Gallbladder dyskinesia
- Pancreatitis
- Henoch-Schönlein Obstruction
- GER
- Gastritis
- PUD
- Constipation
- UTI
- Inguinal-scrotal mass
- Ovarian torsion
## Abdominal Pain: Child

<table>
<thead>
<tr>
<th>CAUSE</th>
<th>DIAGNOSIS</th>
<th>FINDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constipation</td>
<td>Hx, PE</td>
<td>Impacted</td>
</tr>
<tr>
<td>Acute appendicitis</td>
<td>Hx, PE</td>
<td>RLQ pain, leukocytosis, fecalith</td>
</tr>
<tr>
<td>Bowel Obstruction</td>
<td>Hx, PE, AXRs</td>
<td></td>
</tr>
<tr>
<td>Torsion of intra-abd structure</td>
<td>CBC, KUB, US</td>
<td>Cyst, tumor, omental, adnexal</td>
</tr>
<tr>
<td></td>
<td>US/CT Scan</td>
<td></td>
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<tr>
<td>Inguinoscrotal mass</td>
<td>PE</td>
<td>Bulging</td>
</tr>
<tr>
<td>Henoch-Schönlein Purpura</td>
<td>Hx, PE, AXR, US</td>
<td>Intussusception, rectal bleeding, vasculitis</td>
</tr>
<tr>
<td>Mesenteric adenitis</td>
<td>US</td>
<td>Adenopathy</td>
</tr>
</tbody>
</table>
## Abdominal Pain: Adolescent

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<tr>
<th>CAUSE</th>
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</thead>
<tbody>
<tr>
<td>Acute appendicitis</td>
<td>Phys Exam, CBC, KUB</td>
<td>RLQ pain, leukocytosis, fecalith</td>
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<tr>
<td>Meckel diverticulitis</td>
<td>Intra-OR</td>
<td>Meckel’s</td>
</tr>
<tr>
<td>Pancreatitis</td>
<td>Hx, Phys Exam, US Lipase, amylase</td>
<td>GB stones, elevated enzymes, edema, pseudocyst</td>
</tr>
<tr>
<td>GB stones/dyskinesia</td>
<td>Hx, Phys Exam, US HIDA-CCK</td>
<td>Gallstones &lt; 30% ejection</td>
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<tr>
<td>Torsion of intra-abd structures</td>
<td>Phys Exam, US, CT Scan</td>
<td>cyst, tumor, adnexal, omental</td>
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</table>
BOWEL OBSTRUCTION

Key Features

- Vomiting - Bilious vs. Non-bilious
- Proximal vs. Distal
- Previous surgery
- Age of the child
- Always look for an incarcerated inguinal hernia
BOWEL OBSTRUCTION
Imaging

• Abdominal X-rays

• Contrast studies

• Ultrasound
# Bowel Obstruction: Child

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<tr>
<th>CAUSES</th>
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<tbody>
<tr>
<td>PREVIOUS SURGERY (ADHESIONS)</td>
<td>KUB</td>
<td>A/F levels</td>
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<tr>
<td></td>
<td>UGIS</td>
<td>Pinpoint tenderness</td>
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<tr>
<td>HERNIAS</td>
<td>Phys Exam</td>
<td>Inguinal mass</td>
</tr>
<tr>
<td>INTUSSUSCEPTION</td>
<td>Contrast enema</td>
<td>Intraluminal mass</td>
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<tr>
<td>MECKEL’S DIVERTICULUM</td>
<td>Laparoscopy</td>
<td>Meckel’s</td>
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<tr>
<td>MIDGUT VOLVULUS</td>
<td>Contrast study</td>
<td>Malrotation/obstruction</td>
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<tr>
<td>HIRSCHSPRUNG’S</td>
<td>Contrast enema</td>
<td>Transitional zone</td>
</tr>
<tr>
<td>INGESTED FB</td>
<td>KUB</td>
<td>Coins, nails, light bulb</td>
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</tbody>
</table>
# Bowel Obstruction: Adolescent

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<tbody>
<tr>
<td>Appendicitis</td>
<td>AXR</td>
<td>A/F levels Dilated bowel loops</td>
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<td></td>
<td>AXR</td>
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<tr>
<td></td>
<td>UGIS?</td>
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<td>Previous Surgery (Adhesions)</td>
<td>AXR</td>
<td>A/F levels Dilated bowel loops</td>
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<tr>
<td></td>
<td>UGIS?</td>
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<tr>
<td>Tumor</td>
<td>AXR</td>
<td>Mass effect Burkitts Non Hodgkin’s</td>
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<td>US/CT Scan</td>
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<tr>
<td>Congenital Cause</td>
<td>AXR</td>
<td>Band, internal hernia, volvulus</td>
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<td>Laparoscopy</td>
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CASE ONE

A previously well 1 month old male presents with a 24 hr history of vomiting. He was born at term and is breast feed. Family history is unremarkable.

What additional history do you require?
CASE ONE
CASE ONE

Examination reveals a slightly lethargic infant. Vitals are normal with the exception of a tachycardia of 155 beats/minute. Chest and cardiac exam are normal. Abdominal examination reveals the abdomen to be soft with minimal distention.

What additional physical examination do you want to complete?
CASE ONE

What is your differential?

What investigations would you order?
CASE ONE
CASE ONE

How would you manage this infant?
CASE ONE
An 18 month old female presents with a 36 hour history of intermittent abdominal pain. She has had an URTI for the past week and she has had loose stools for the past 3 days. Her past medical history is unremarkable.

What additional history do you require?
CASE TWO

Examination reveals a crying child who is drawing her legs up. Vital signs are stable. ENT examination reveals a slightly red right TM. Chest and cardiac examination are normal. Abdominal examination reveals mild distention, but she will not settle enough to palpate accurately.

What additional physical examination do you want to complete?
CASE TWO

What is your differential?

What investigations would you order?
CASE TWO

How would you manage this infant?
CASE TWO
CASE TWO