Abdominal Pain in Kids: What’s a School Nurse to Do?

Kathe Menown, RN, CPNP
Jennifer Verrill Schurman, PhD, ABPP, BCB

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Epidemiology

• Affects 10-20% of all school-age children
  – Occurs weekly in 13-17%
  – Interferes with daily activities in 21%
Acute vs. Chronic Abdominal Pain
ACUTE GI CONCERNS:
What to Assess and What to Do
Viral Gastroenteritis (GE)

• AKA “Stomach Flu”
  – +/- nausea or vomiting
  – +/- fever
  – +/- abdominal pain or cramping
  – Irritable, due to discomfort or dehydration
  – Headache or malaise
Appendicitis!

• Inflammation of the vermiform appendix, which is the blind pouch at the end of the cecum

• Most common condition requiring abdominal surgery in childhood
Appendicitis!

- Abdominal pain; +iliopsoas test, +Markle (heel jar), +McBurney sign
- Pain precedes fever and vomiting
  - In GE, pain is later
- Low grade fever
- Nausea and/or vomiting
- No appetite
- CBC; elevated WBC (not >15-20,000)
- Guarding of abdomen, hesitant to move
CHRONIC GI CONCERNS:
What to Assess and What to Do
A Historical Perspective

- Chronic abdominal pain viewed as result of either organic or non-organic causes (i.e., body or mind)
- Less than 5-10% defined (traditionally) as “organic” (e.g., IBD, celiac disease)
- Many providers offer reassurance only
  - No organic cause apparent
  - Child will “outgrow” it
A More Modern View

Organic vs. “Functional”
Red Flags for Organic Disease

- Fever
- Weight loss
- Blood in stools
- Nocturnal pain
- Localized pain
- Rash, joint pain, apthous ulcers, dysuria
- Elevated ESR or CRP
- + FH PUD or IBD
- Dehydration
Terms You May Hear...

- **Eosinophilic Gastroenteritis (EGE)**
  - Variations by location of inflammation (e.g., Eosinophilic Duodenitis/Enteritis, Eosinophilic Enterocolitis)
  - Considered a biologic contributor to pain, not “diagnosis” per se (in most situations)

- **Functional GI Disorder (FGID)**
  - Symptom-based diagnoses, including:
    - Functional Dyspepsia
    - Irritable Bowel Syndrome
    - Functional Abdominal Pain
A NEW PERSPECTIVE
on Chronic Abdominal Pain in Children
The Biopsychosocial Model

Chronic Abdominal Pain

Biology
- Visceral/Nerve hypersensitivity
- Inflammation
- Motility
- Gut flora

Environment
- School
- Peer relationships
- Parent/family interactions

Psychology
- Mood
- Anxiety
- Coping skills
- Sleep

The Children’s Mercy Hospital, 2014. 03/14
A CASE STUDY

“Steven”
What’s a school nurse to do?

• Fortunately, a lot, including:
  – Fostering early intervention/referral
  – Offering continued assessment
  – Encouraging normal daily activity
  – Supporting child’s efforts to positively cope
  – Setting an emotional example
  – Advocating for effective use of accommodations at school
Early Intervention is Key

Chronic Abdominal Pain

School Absence

Missed Social Opportunities

Missed Learning Opportunities

Mood Problems

NORMAL DEVELOPMENTAL TRAJECTORY
Making a Referral

• *Even in the absence of red flags,* families should see a physician to further assess/treat contributors to the child’s pain

• Appropriate options may include:
  – Primary care physician
  – Gastroenterologist
  – Abdominal pain program
Continued Assessment

• School nurses are well-positioned to:
  – Monitor for the development of red flags
  – Assess the positive/negative effects of medication
  – Communication/coordinate with the physician/team
  – Support the child and promote recovery within the school environment
### Medications: Inflammation

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singulair</td>
<td>5-10 mg daily</td>
<td>Possible mood changes</td>
</tr>
<tr>
<td>Zantac</td>
<td>10 mg/kg/day (BID)</td>
<td>Headache, sedation</td>
</tr>
<tr>
<td>Atarax</td>
<td>2 mg/kg/day (TID)</td>
<td>Sedation, anticholinergic effects</td>
</tr>
<tr>
<td>Prednisone</td>
<td>1 mg/kg/day for 5 days (max dose 40 mg daily)</td>
<td>Nervousness, weight gain, insomnia</td>
</tr>
<tr>
<td>Entocort (3 mg capsules)</td>
<td>9 mg daily for 3 weeks; 6 mg daily for 1 week; finally 3 mg daily for 1 week</td>
<td>Weight gain, headache</td>
</tr>
<tr>
<td>Gastrocrom (20 mg/5 ml)</td>
<td>Starting dose is 2 vials (max dose 4 vials) 4 times a day</td>
<td>Unpleasant taste, dizziness, headache</td>
</tr>
</tbody>
</table>
## Medications: Nerve Sensitivity

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elavil</td>
<td>0.1 to 0.5 mg/kg at bedtime</td>
<td>Anticholinergic effects, sedation</td>
</tr>
<tr>
<td>Prozac (SSRI)</td>
<td>Starting dose of 20 mg daily</td>
<td>Headache, dizziness, restlessness, nightmares</td>
</tr>
<tr>
<td>Buspar</td>
<td>Starting dose of 5 mg BID</td>
<td>Dizziness, headache, sedation, nightmares</td>
</tr>
<tr>
<td>Melatonin</td>
<td>Starting dose of 3 mg at bedtime (max dose 10 mg at bedtime)</td>
<td>No known side effects</td>
</tr>
<tr>
<td>Ginger (for nausea)</td>
<td>550 mg tablets 2 tablets TID</td>
<td>No known side effects</td>
</tr>
</tbody>
</table>
Encourage Normal Daily Activity

• Maintain current expectations for functioning at school and
• Provide support/encouragement for positive, proactive coping
  – Schedule breaks if there is a pattern
  – Allow “as needed” breaks if random
• Support within structure
Positive Coping

• Relaxation/Distraction
  – Deep breathing
  – Listening to calming music
  – Reading a book

• Positive thinking
  – “I will be fine. I just need to take a break and relax for a minute.” “The medication will help soon.”

• Problem solving
Develop a Coping Plan

• Work with the child to outline a plan for managing discomfort at school

• May include:
  – Taking medications
  – Going to the restroom
  – Using positive coping (specify location/items needed)
  – Having a snack, water, or peppermint

• Having a plan can empower the child
Set an Emotional Example

• Frustration and/or worry are normal

• Try to remain calm in front of the child
  – Take a deep breath or a break yourself if needed to manage tension or upset
  – Reach out to the treatment team for more information and/or guidance
  – Return to the student when calmer

• Use neutral words to talk about pain
Initiating a 504 plan can help the child to:

- Express his/her needs proactively
- Feel more comfortable and confident in attending school
- Reduce absenteeism
- Improve school performance

Importantly, this also ensures consistent application across teachers/settings.
Common Accommodations

• Improve access to the bathroom at school
  – Best with use of a nonverbal communication system
  – Consider need for a private bathroom

• Encourage taking brief breaks to use stress and pain management skills

• Make water/snacks available between meals
Other Accommodations

- Carefully consider current backlog of make up work
- Set up a reasonable schedule for completing make up work
- Encourage participation in clubs and sports while working on getting back to school
- Stress can exacerbate pain and slow recovery!
Dealing with Absenteeism

- Inconsistent (i.e., “ping pong”) attendance
- Periodic absenteeism
- Prolonged absenteeism
Gradually Increase Expectations

• In the case of inconsistent attendance:
  – First, stop the slide!
    • Create a consistent daily schedule with temporarily reduced demands (e.g., modified school day)
    • Stick to the schedule (no more, no less)
  – Then, develop a long-term plan for adding back time/activities at a tolerable pace
  – Slow and steady is key
Where does homebound fit in?

• Homebound education is:
  – Not typically in the child’s best interest
  – Frequently requested by parents and/or encouraged by school personnel
  – A strategy to bridge return to school, *if done thoughtfully*
    • Most appropriate following prolonged absence
    • “Intermittent” homebound may be helpful for children on a modified school day
Effective use of homebound

1. Pick a class to be added back first
   - Can be elective/preferred or based on best time of day for symptom control

2. Prioritize getting caught up in selected class

3. Once caught up, child attends that class daily
   - No more HB support for that class
   - Can add in smaller time intervals if needed (e.g., 30 minutes self-study in library before adding 60 minute class)

4. Repeat steps until back in school full time
It may be counterintuitive, but...

Pain -> School absence

Stress -> Make up work
Sick Days

• How can a parent tell when the child should stay home from school?

• Concrete recommendations can help:
  – A temperature of 100° or higher in past 24 hours;
  – Repeated vomiting and/or diarrhea in past 24 hours;
  – Inability to keep down clear liquids; and/or,
  – Evidence of a contagious infection.
Sick Days

• Let parents know:
  – When in doubt, send the child to school and then call the physician.

• If a child is too sick to go to school (using the previous criteria):
  – S/he should rest quietly in bed (e.g., no TV, computer, or video games); and,
  – S/he may go to school late or work on schoolwork at home if feeling better.
Sick Days

• When at school:
  – Don’t send the child home unless s/he meets the “contagious illness” criteria
  – Allow to follow the coping plan and return to class during flares of the child’s usual symptoms
Quick is for instant oatmeal...

• Some positive signs of recovery include:
  – Regular school attendance
  – Improvement in grades
  – Fewer trips to the nurse’s office
  – Return to sports, dance, or other activities
  – Improved confidence in coping with pain
  – Decreased frequency and/or intensity of pain
SO, WHATEVER HAPPENED TO…?

“Steven”
For more information on chronic abdominal pain in children

Please contact the Children’s Mercy Abdominal Pain Program
Phone: 816-983-6975
WWW: http://www.childrensmercy.org/AbdominalPainProgram/