

GOALS - By the end of the session, the student will be able to:

1. Identify the key features of the illness of abdominal pain and describe how the location and radiation of the pain helps to determine the etiology of the pain.
2. Make a problem list for this patient.
3. List the age appropriate differential diagnosis for pediatric patients presenting with *acute abdominal pain*.
4. Find reliable resources to help in distinguishing the various etiologies of abdominal pain.
5. Describe the epidemiology, clinical, laboratory, and radiographic findings, of *appendicitis, constipation, gastroenteritis, HSP, intussusception, PID, functional abdominal pain and UTI*.
6. Explain how the physical manifestations of disease and the evaluation and management may vary with the age of the patient. Be able to give specific examples.
7. Discuss the characteristics of the patient and the illness that must be considered when making the decision to manage the patient in the hospital or in the outpatient setting.

You are asked to see an 11 year old girl in your preceptor's office. Her mother called a few minutes ago and brought her in right away to be evaluated.

CC: Low abdominal pain

HPI: Ellie is a quiet young lady who has been seen mostly for well visits. She has been going to school and playing on the weekends as usual. She did not want any dinner last evening and seemed quieter than her usual.

This morning Ellie awoke a little later than usual and did not get out of bed and get dressed for school. Soon she started to complain that her stomach hurt. Mom told her to sit down and watch TV and that it would pass. When mom checked on her about an hour later, Ellie was curled up on the couch, obviously uncomfortable. Mom thought that she felt a little warm. Ellie said her whole stomach hurt, but kept holding the bottom.

Ellie said that she had urinated when she first got up. She refused to eat or drink anything, saying that it would make her worse. She did not really want to get up and walk. When she did get up, she moved slowly and walked hunched over. Ellie did vomit once later in the morning. She has no cough, no high fevers, no sore throat, no dysuria, frequency, or local pain. Her hips "kinda hurt." She has grown a lot this year and started to go through puberty (mom notes that she has developed some breasts and a little straight pubic hair), but has not yet had a menstrual period.

Ellie takes no medicines, though she is supposed to take fluoride.

Immunizations: UTD through her 6 year old shots.

PMH: Normal 40 3/7 week pregnancy. Vaginal delivery, home with mom. Apgars 10 and 10. No perinatal problems.

Three ear infections in her life, the last at 20 months.

Strep throat once a year ago.

DEV: Always normal. Walked at 11 months. Talked by 2 yr. Always has done well in school. She loves to play, ride her bike and sing in the choir at church.

SH: Lives with mom, dad, parakeet Pete, and sister Anna, 12 years old. She is in sixth grade, having started at the local middle school last September. That has been a transition for her. She is more anxious about school and occasionally has given mom and dad a hard time about going to school.

FH: Dad had his appendix out at 16 years old. He is heavy set, but has no medical problems that he knows of. Mom is well. Maternal grandparents are healthy; grandmother is on estrogen replacement, but otherwise takes no medicines. Paternal grandfather died in the war.

PHYSICAL EXAMINATION

Gen: Long, lean, mildly, diaphoretic, mildly ill-appearing, uncomfortable, quiet in the bed, on her side with knees pulled up. She is quiet, but cooperates with the examination. She appears frightened.

Vitals: BP: 120/58 P: 120 RR: 20 and shallow T: 99.5 O2 sat: 99%

Growth: 50% for HT and 15% for WT

HEENT: long, thin face with smooth facial features. She has a stylish hair cut and large teeth for her mouth.

EOMI, PERRL clear conjunctiva.

TMs normal landmarks and light reflex

Nasal mucosa is mildly edematous, violet and pink, with clear discharge.

Mouth: dull, slightly moist mucosa, pink, good dentition,

Neck: a few scattered lymph nodes. No thyroid is palpable. Supple neck.

Chest: Good air entry and clear to auscultation and resonant to percussion.

Cor: Normal S1 and S2 is physiologically split. Rhythm varies with respiration.

Soft I/VI flow murmur at the left lower sternal border.

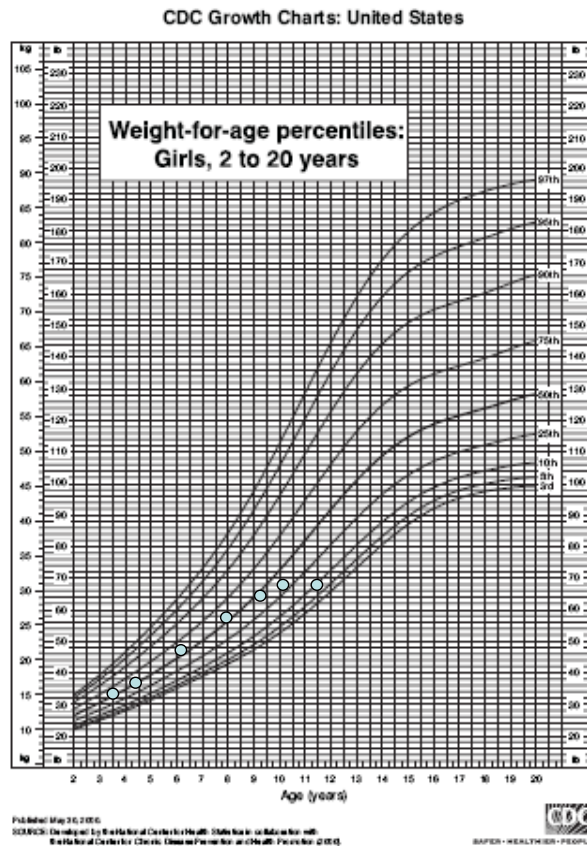
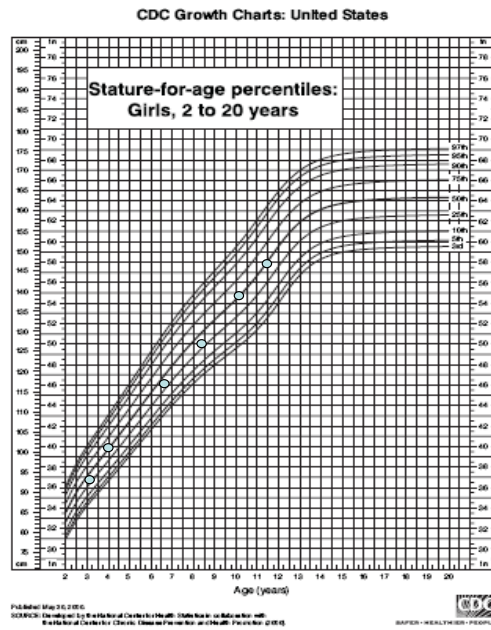
Abdomen: Flat with occasional bowel sounds of normal quality. Tender to percussion, she asks you not to do that. Abdomen is soft though she guards when you try to palpate the lower quadrants, with more guarding on the right than the left. No hepatosplenomegally. You have the sensation of fullness in the right lower quadrant without a distinct mass. She does not want you to move her hips.

Tanner II-III breasts, II pubic hair

Extremities: no clubbing or cyanosis. No edema.

Skin: A few bruises of varying ages on the pretibial area bilaterally.

- 1. What are the diagnostic possibilities? What do you want not to miss? For instance, could she be abused?**
- 2. Does this child's size and growth pattern change your differential diagnosis?**
- 3. What diagnostic and therapeutic evaluation would you do?**
- 4. What monitoring would you do?**



DATABASE

CBC

11.7 \ _____ /186
 / 35.4 \

CHEM

139 | 101 | 6 | 111
 4.1 | 21 | 0.4

DIFF 67 Seg 7 bands 20 lymph 4 mono

U/A 1.023 neg except 13 WBC and 3 RBC

LFT SGOT 21 SGPT 17 Alk Phos 119 T. bili 0.3

ABD Flat and upright – nonspecific bowel gas pattern. Air throughout the bowel but no RLQ air raises the question of fluid there. No air fluid levels and no free air noted.

ABDOMINAL PAIN QUESTIONS**Pre-conference**

1. The further from the umbilicus abdominal pain is, the more likely it is to be pathological.
 - a. True
 - b. False

2. Which of the following is NOT a cause of RLQ pain?
 - a. Crohn's Disease
 - b. Appendicitis
 - c. Ovarian torsion
 - d. Ruptured ovarian cyst
 - e. Splenic rupture

3. Which of the following presents with waves of abdominal pain and otherwise pain free?
 - a. Intussusception
 - b. UTI
 - c. Functional abdominal pain
 - d. Appendicitis
 - e. Menses

4. Which of the following is typical of the clinical picture of intussusception?
 - a. The patient is Tanner 3.
 - b. The child's mental status is not normal.
 - c. The pain is constant
 - d. The pain is diffuse.
 - e. The child has diarrhea.

5. Which is the most common developmental stage to torse an ovary?
 - a. Tanner 1
 - b. Tanner 2
 - c. Tanner 3
 - d. Tanner 4
 - e. Tanner 5

6. Which of the following findings most strongly suggests that the patient has ruptured his appendix?
 - a. 2 episodes of vomiting
 - b. fever to 101 F
 - c. WBC of 31.400
 - d. A tender mass on rectal examination
 - e. Urine with WBC=6

Post- conference

For questions 1-5: You are seeing a 1 year old who is intermittently crying and pulling his legs up to his chest, his parents think, due to abdominal pain for the last three hours.

1. If you were thinking this was intussusception and you found that there was a tender mass in the RLQ, the diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

2. If you were thinking that this is intussusception and the child intermittently stops crying and has a soft abdomen, your diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

3. If you were thinking that this is colic, and you found that this is the first episode of pain and the pain does not change with rocking, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

4. If you were thinking that this child has GER and you found that the child “never throws up,” this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

5. If you were thinking that the child has appendicitis, and you found that his abdomen seems tender all over and tense in the RLQ, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

For questions 6-15: You are seeing an 11 year old girl who has had worsening abdominal pain for the past several hours. Initially the pain was all over, but now it is low in her abdomen. She is nauseated and refuses to eat or drink more than a sip.

6. If you were thinking that she has appendicitis and you learned that she two loose stools in the last 3 hours, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

7. If you were thinking that she has appendicitis and you felt a fullness in the RLQ, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

8. If you were thinking that she has appendicitis and the ultrasound did not show her appendix, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

9. If you were thinking that she has pyelonephritis and her bladder did not seem tender on exam, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

10. If you were thinking that she has pyelonephritis, and she did not have a fever, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

11. If you were thinking that she has pyelonephritis, and you found WBC and RBC in her urine analysis, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

12. If you were thinking that she has constipation and you found that she had a bowel movement this morning, this diagnosis is:
 - a. ruled out or almost ruled out
 - b. less probable
 - c. neither more or less probable
 - d. more probable
 - e. certain or almost certain

13. If you were thinking that she has constipation as the etiology of her abdominal pain, and you found that she has a ground glass full-appearing transverse and descending colon, this diagnosis is:
- ruled out or almost ruled out
 - less probable
 - neither more or less probable
 - more probable
 - certain or almost certain
14. If you were thinking that this was functional abdominal pain because this has happened several times before and she is afraid of a test she is supposed to take at school today, and you find that she has a temperature of 100.7, this diagnosis is:
- ruled out or almost ruled out
 - less probable
 - neither more or less probable
 - more probable
 - certain or almost certain
15. If you were thinking that this was functional abdominal pain because this pain happens every few weeks and you found that she is very tender and has rebound in her RLQ, this diagnosis is:
- ruled out or almost ruled out
 - less probable
 - neither more or less probable
 - more probable
 - certain or almost certain