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Practice Matters: Red Flags in Evaluating Adult Abdominal Pain

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Introduction

According to the *National Hospital Ambulatory Medical Care Survey: 2013 Emergency Department* statistics, abdominal pain was the leading cause of presentation to an emergency department (Rui, Kang, and Albert, 2013). Abdominal pain is a common and often benign complaint in patients presenting to the healthcare provider for evaluation. However, there are life-threatening causes to be considered with the presentation of abdominal pain. The faith community nurse may be the first provider to evaluate this patient and refer the patient for further evaluation and treatment.

Objectives:

After reading this article, the FCN will be able to:

1. define acute abdominal pain;
2. state three types of pain;
3. state potential areas of concern related to the pain presentation;
4. state red flags for immediate referral to a healthcare provider;
5. state red flags for colon cancer.

Epidemiology

Over 5.6 million annual visits are made to emergency departments with a chief complaint of stomach and abdominal pain, cramping and spasms not related to injury representing18% of emergency department visits (Agency for Healthcare Research and Quality [AHRQ], 2014). Furthermore, abdominal pain represents 1.5% of all office-based visits (Center for Disease Control [CDC], 2010). The origin of the pain can be organic or functional. Organic pain originates within an organ, while functional pain relates to the functioning of the system involved. Organic or functional origins of pain may share some of the same symptoms, which make it difficult to diagnose. This wide variety of patient presentation and symptom origin contributes significantly to the cost of care and is the third most common reason for seeking care in an emergency room (AHRQ, 2014).

Types of Abdominal Pain

There are two types of abdominal pain, acute and chronic. Acute abdominal pain is of short duration, generally less than six months and associated with a specific event, such as injury, illness, and/or surgery (Ball, Dains, Flynn, Solomon & Stewart, 2015a). Persistent or chronic pain can last for several months or more

(Ball et al., 2015b). A discussion of chronic pain is beyond the scope of this article.

The origin of abdominal pain relates to anatomy, physiology, and embryonic development of the abdominal organs. Hollow organs such as the stomach, intestines, and urinary bladder produce pain or discomfort when the stretch receptors within the organs are distended producing what is known as visceral pain. Visceral pain is often described by the patient as deep, aching, or colicky pain which is poorly localized and not well defined by the patient (Litwack, 2009). The second type of pain described is somatic pain. Somatic pain is usually inflammatory in origin, well localized, described as sharp, and often is exacerbated by movement (Litwack, 2009). Lastly, neuropathic pain may be described in the abdomen. Just as suggested, the origin of this pain is in the nervous system. The pain is described as burning, electric, or searing in nature (Litwack, 2009). Neuropathic pain may be provoked by unusual stimuli, such as light touch. Not all pain is felt in the area of the origin of the pain. This type of pain is referred pain and is caused by innervation of two areas by the same spinal segment (Litwick, 2009). Figure 1 illustrates how pain can be perceived in one area of the anatomy, but originates in a different and sometimes distant part of the body (see Figure 1).

Nursing Assessment and Considerations

Collecting a thorough history is imperative in making a good decision about the urgency of the patient presenting with abdominal pain. Using the pneumonic OLDCARTS (Ball, et al., 2015a) provides vital information for the faith community nurse to make a decision whether or not to refer a patient for further care (Table 1). Looking for the patient to describe events as the "worst ever", "ripping", or "tearing" are indications for immediate referral to the emergency room (Ball, et al., 2015a). Temporal factors are important to the assessment of pain. Noting a relationship to time of day, day of week, or other sequence of time can lend important clues to the origin of the pain.

Key questions for all women of childbearing years includes asking about the last normal menstrual period and sexual activity. Some women, especially younger women and adolescents, may not reveal vital information about pregnancy. Abdominal pain in pregnancy is always a red flag for referral to the emergency room for evaluation (Dains, Baumann, & Scheibel, 2016). (Refer to Table 2).

Colon cancer is a consideration in the patient with acute abdominal pain when presenting with a red flag or certain signs and symptoms (Table 3). Although, preventable, colon cancer will cause 50,000 deaths this year (American Cancer Society [ACS], 2017). The risk factors for colorectal cancer are age (>60

years of age), personal or family history of colon polyps, overweight/obesity, physical inactivity, diet high in red meats, processed and fried meats, smoking, and heavy alcohol use (ACS, 2017). African Americans and Jews of Eastern European descent (Ashkenazi Jews) have higher risk of colorectal cancer (ACS, 2017). All adults over the age of 50 years of age are recommended to be screened for colon cancer (ACS, 2017). Adults with risk factors should discuss screening before 50 years of age with their primary care provider. Screening practices and modifying colon cancer risk are key to reducing the incidence of colon cancer.

Finally, pain perception in the elderly may be blunted. Altered mobility affects intestinal motility along with diminished vascular supply to abdominal structures and diminished immune response places the geriatric patient at risk of advanced illness with few signs and symptoms (Ball et al., 2015b). Changes in alertness level, physical movement, and/or falls may be the first clue to problems in the elderly (Dains et al., 2016). Fever may be absent or low grade in the elderly; any fever should be investigated as a pathological process (Dains et al., 2016).

Physical examination in the community setting can include some basic techniques to assess for abnormalities. The contour of the patient's abdomen can be inspected to determine if any bulges or herniations are present. The FCN can also auscultate for bowel sounds in all four quadrants of the abdomen. Hypoactive or absent bowel sounds can indicate intestinal problems ranging from constipation to paralytic ileus. If the FCN cannot auscultate bowel sounds, the patient should be referred for further evaluation. Light palpation of a depth of 1 inch or less can be performed to determine areas of tenderness and the presence of rigidity. Deep palpation in the community setting should be limited due to the risk of rupturing enlarged organs.

Table 1.

OLDCARTS[a]

O Onset	When was the first time?
L Location	Where did it start and does it stay there?
D Duration	Does it come and go? Or constant?
C Character	Burning, aching, dull, sharp, etc.
A Aggravating/associated	Aggravated with movement, motion, light, sound etc.? What makes it worse? Associated with nausea, vomiting, diarrhea?
R Relieving factors	Rest, sleep, stillness? What makes it better?
T Temporal factors	Time of the day, day of the week, week of the month?
S Severity of symptoms	Scale of 1-10, prevents going to work or school.

[a]Ball et al., 2015

Table 2.

Red flags for Abdominal Pain Emergencies[a]

Key words: worst ever, ripping, or tearing to describe pain

Fever	Abdominal pain with walking
Hematochezia or hematemesis	Distended abdomen
Pregnancy	Diaphoresis with pain
Intractable vomiting	Pain which awakens from sleep
Lightheadedness on standing	Pulsatile mass
Acute onset of pain	
Intensifying pain over time	
Trauma to abdomen	

[a]Dains, Baumann, & Scheible, 2016

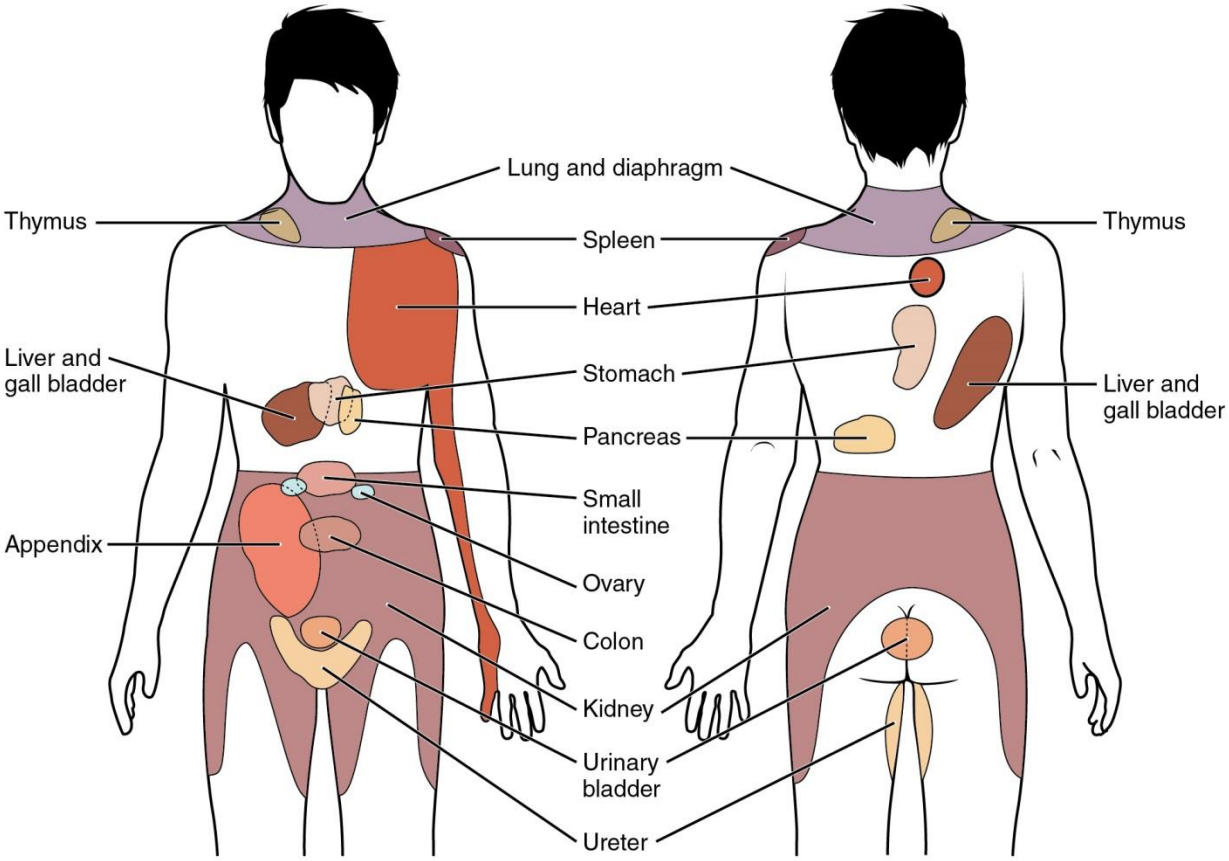
Table 3.

Signs and Symptoms of Cancer[a]

Unexplained weight loss	Changes in bowel habits
Fever	Persistent indigestion
Fatigue	Bleeding from bowel – red or maroon
Persistent pain	
Skin changes color – yellow or darker	

[a]American Cancer Society, 2014

Figure 1. Referred Pain Chart



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Patient Education Resources

http://www.emedicinehealth.com/abdominal_pain_in_adults/article_em.htm
https://familydoctor.org/symptom/abdominal-pain-stomach-pain-short-term/
http://www.cancercenter.com/colorectal-cancer/learning/

Conclusion

Abdominal pain is a symptom that often leads a patient to contact a healthcare provider for information and reassurance. FCNs may work with patients experiencing abdominal pain for a variety of reasons, some of these instances of pain will be benign, but others will need rapid assessment and referral for

treatment. Symptoms should be assessed based on completion of a through history of the pain symptoms and being alert for signs that signal a more serious condition such as intractable vomiting or a pulsating mass. Nurses should also be aware of signs that may indicate a cancerous condition. Patient education materials are widely available and can assist patients in better understanding the causes of their abdominal pain. Through thorough assessment and provision of education, FCNs can improve outcomes for patients experiencing acute abdominal pain.

References

Agency for Healthcare Research and Quality (AHRQ). (2014). *Trends in emergency department visits 2006-2011*. (Healthcare cost and utilization project statistical brief #179). Retrieved from: https://www.hcup-us.ahrq.gov/reports/statbriefs/sb179-Emergency-Department-Trends.pdf

American Cancer Society. (August 11, 2014). *Signs and Symptoms of Cancer*. Retrieved from https://www.cancer.org/cancer/cancer-basics/signs-and-symptoms-of-cancer.html?gclid=CN-Kyu-q7dECFYE8gQodUJ8ItQ&mkwid=sWtQsfaK9_dc

American Cancer Society. (2017). Key statistics for colorectal cancer. Retrieved from: https://www.cancer.org/cancer/colon-rectal-cancer/about/key-statistics.html

Ball, J., Dains, J., Flynn, J., Solomon, B., & Stewart, R. (2015a). Vital signs and pain assessment. In *Seidel's guide to physical examination (8th ed.).* (pp. 50-63). St. Louis, MO: Elsevier.

Ball, J., Dains, J., Flynn, J., Solomon, B., & Stewart, R. (2015b). Chapter 17 Abdomen. In *Seidel's guide to physical examination (8th ed.).* (pp. 370-415). St. Louis, MO: Elsevier.

Centers for Disease Control and Prevention. National ambulatory medical care survey: 2010 summary tables. http://cdc.gov/nchs/ahcd/web_tables.htm.

Dains, J., Baumann, L., & Scheibel, P. (2016). Abdominal pain. In *Advanced health assessment and clinical diagnosis in primary care (5th ed.)* (pp. 11-32). St. Louis, MO: Elsevier.

OpenStax CNX. (Jun 5, 2013). OpenStax, autonomic reflexes and homeostasis. http://cnx.org/contents/0bae7483-e6a1-47eb-8571-723ea8ed4131@2.

Litwack, K. (2009). Somasensory function, pain and headache. In C. Porth & G. Matfin, *Pathophysiology: Concepts of altered health states (8th ed.)* (pp1225-1259). Philadelphia, PA: Wolters Kluwer Heath/Lippincott Williams & Watkins.

Rui, P., Kang, K., Albert, M. National hospital ambulatory medical care survey: 2013 emergency department tables. https://www.cdc.gov/nchs/data/ahcd/nhamcs_emergency/2013_ed_web_tables.pdf