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Common Clinical Manifestations of Gastrointestinal Disease

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A. Abdominal Pain

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DEFINITION AND EPIDEMIOLOGY

Abdominal pain is a frequent manifestation of intra-abdominal disease. However, abdominal pain is difficult to localize or grade because the sensation of pain often is colored by emotional and physical factors. Abdominal pain may be classified as acute or chronic. Acute pain occurs suddenly and more often suggests serious physiologic alterations. Chronic pain may be present for several months; although it does not mandate immediate attention, chronic pain may lead to prolonged evaluation. According to a recent report, abdominal pain is the most common symptom in patients presenting to gastroenterology clinics in the U.S., with almost 16 million estimated visits in 2009 alone. Appropriate evaluation of abdominal pain requires knowledge of pain mechanisms, close attention to history and physical examination findings, and recognition of important accompanying symptoms as well as awareness of the strengths and weaknesses of the tests that might be used.

PHYSIOLOGY

Abdominal pain results from stimulation of receptors specific for thermal, mechanical, or chemical stimuli. Once these receptors are excited, pain impulses travel through sympathetic fibers. Abdominal pain can be characterized as somatic or visceral. Somatic pain originates from the abdominal wall and parietal peritoneum, whereas visceral pain originates in internal organs and from the visceral peritoneum. Two types of neurons carry pain: A fibers, which have rapid conduction, and C fibers, which have slow conduction. Most visceral neurons are of the C type, and the pain resulting from their stimulation tends to be variable with regard to sensation and localization. In contrast, both A and C fibers originate from the parietal peritoneum and abdominal wall, and somatic pain tends to be sharp and distinctly localized.

Because of this pattern of innervation, abdominal viscera are not sensitive to cutting, tearing, burning, or crushing. However, visceral pain results from stretching of the walls of hollow organs or of the capsule of solid organs, as well as from inflammation or ischemia.

CAUSES OF ABDOMINAL PAIN

Multiple intra-abdominal and extra-abdominal disorders can produce abdominal pain. Distinguishing acute from chronic symptoms is helpful. The approach varies with each specific cause, but acute abdominal pain usually demands prompt intervention.

CLINICAL PRESENTATION

History

The differential diagnosis of abdominal pain, whether acute or chronic, requires thorough history taking with regard to pain characteristics, location and radiation, timing, and the presence of any accompanying symptoms. Recognition of characteristic patterns is essential to narrowing the differential diagnosis.

Pain location often indicates the organ responsible for the problem. For instance, epigastric pain is usually typical of peptic ulcer or dyspepsia, whereas right upper quadrant pain is more suggestive of cholecystitis and other biliary disorders. Early in the course of illness, pain may be perceived in one location and subsequently felt in another; this pattern of progression may be suggestive of specific pain syndromes. In acute cases, abdominal pain tends to be sharp and severe. The pain of a perforated viscus is intense, and the pain from a dissecting aneurysm may be described as tearing or crushing. Chronic pain may be less severe; pain from irritable bowel or dyspepsia is constant and dull, and the pain of chronic peptic ulcer is described as gnawing or hunger pain. The pattern of pain relief is helpful for diagnosing some conditions. The physician should also inquire about whether the pain is steady or intermittent and whether it occurs at night. For nocturnal pain, a distinction should be made between pain that awakens the patient and pain that is felt when the patient wakes up for other reasons.

Table 33-1 outlines characteristics, location, and radiation of pain for a few common acute and chronic abdominal conditions.

Physical Examination

Examination of the abdomen provides valuable clues to the diagnosis, but the examination should start with the general appearance of the patient. A patient who is writhing in bed and unable to find a comfortable position may be suffering from obstruction. In contrast, a patient lying with the lower extremities flexed and