

Appendicitis Assessment

Appendicitis is inflammation of the appendix often as a result of an obstruction of the lumen of appendix. Obstruction results in distention, venous engorgement, and the buildup of bacteria and mucus, leading to possible complications, such as peritonitis and sepsis. It results in one of the most common abdominal surgical emergencies that occurs in children with the average age being 10 years affecting boys and girls equally before puberty. Symptoms may include periumbilical pain, RLQ pain, nausea, vomiting, anorexia, rebound tenderness, increased white blood cells, and fever.



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Mechanism

Obstruction of Appendix

Obstructed Appendix-pen

A common cause of appendicitis is obstruction of the intestinal lumen by a fecalith (accumulated feces). This obstruction impairs blood supply and can cause bacterial infection in the wall of the appendix, which may cause gangrene. It is important to relieve the obstruction as soon as possible.

Signs and Symptoms

Periumbilical Pain

Pear-umbrella Pain-bolts

An early symptom of appendicitis is periumbilical pain that may be described as a dull and throbbing pain localized around the navel. This pain may also be referred to as epigastric pain and often progresses to right lower quadrant (RLQ) pain.

RLQ Pain

RLQ Pain-bolts

As swelling in the appendix increases, the pain tends to move toward the right lower abdomen and localizes at McBurney's point (halfway between the umbilicus and the right iliac crest). It is often described as pain that is persistent and continuous, progressing over the course of 4-6 hours. Coughing, sneezing, and deep inhalation may intensify the pain, while a side-lying position with abdominal guarding (legs flexed) relieves the pain.

Nausea/Vomiting/Anorexia

Vomiting Anorexic-Rex

General symptoms such as nausea, vomiting, and anorexia may be seen in patients.

Increased White Blood Cells

Up-arrow White Mac-man

An increase in white blood cells occurs in a state of infection. In early appendicitis, before infection sets in, WBCs may be normal, but most often a mild elevation will occur.

Rebound Tenderness

Rebounding Tenderizer

Rebound tenderness refers to pain upon the removal of pressure rather than the application of pressure to the abdomen (the latter is referred to as abdominal tenderness). More simply put, it is pain experienced on deep palpation after a sudden release. It represents aggravation of the parietal layer of the peritoneum by stretching or moving.

Fever

Fever-beaver

A low grade fever may or may not be present. It typically occurs as the appendix becomes increasingly inflamed as part of the body's natural immune response. A fever is noted at 100.4 degrees Fahrenheit, while a low grade fever ranges between 99 and 102 Fahrenheit.

Complications

Peritonitis

Parrot-toe-on-fire

Peritonitis is inflammation of the peritoneum often occurring from a perforated appendix, which results in a release of its contents into the normally sterile peritoneal cavity. It presents as a sudden relief of pain and then a subsequent increase in pain accompanied by right guarding of the abdomen. Patients may present with a fever, abdominal distension, tachycardia, tachypnea, pallor, chills, restlessness and irritability.

Sepsis

Sepsis-snake

Sepsis is a possible complication as bacteria enters the peritoneal cavity. This is a serious and deadly condition that must be treated immediately.