





The appendix

The appendix

- *is a closed-ended, narrow tube that attaches to the cecum (the first part of the colon) like a worm. (The anatomical name for the appendix, vermiform appendix,*
- *The inner lining of the appendix produces a small amount of mucus that flows through the appendix and into the cecum. The wall of the appendix contains lymphatic tissue that is part of the immune system for making antibodies.*

What is appendicitis?

- Inflammation of the vermiform appendix (a blind pouch located near the ileocecal valve in the right lower quadrant of the abdomen) is known as appendicitis. It may be due to obstruction from stool. The mucosal lining of the appendix continues to secrete fluid, which will increase the pressure within the lumen of appendix, causing a restriction of the blood supply to the appendix. This decrease in blood supply may result in gangrene or perforation as the pressure continues to build. Pain localizes at McBurney's point, located midway between the umbilicus and right anterior iliac crest.

Appendicitis



Causes

- Appendix becomes blocked, often by stool, a foreign body, kinking, or cancer.
- Blockage may also occur from infection, since the appendix swells in response to any response in the body.

Types of appendicitis

- There are 2 basic types of appendicitis
 - Chronic appendicitis
 - Acute appendicitis

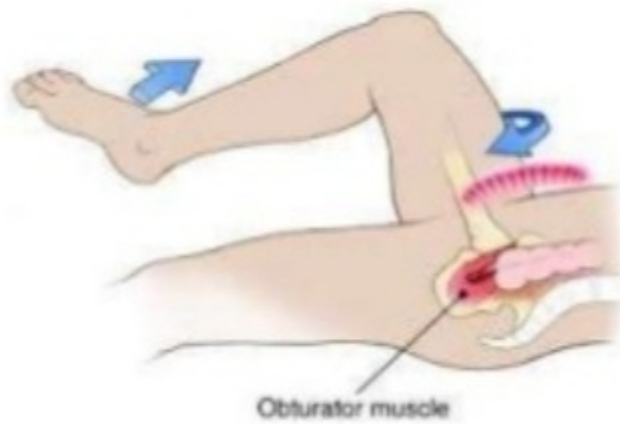
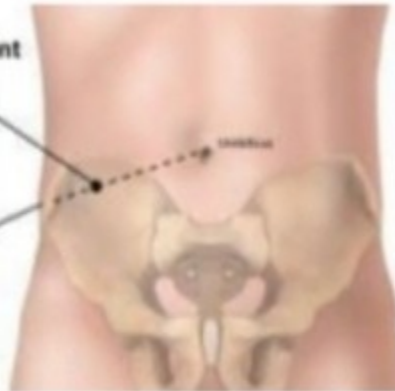
Rovsing's Sign



McBurney's Point

2/3 of the way from umbilicus to ASIS

Anterior Superior Iliac Spine



What are the symptoms of appendicitis?

- 1. abdominal pain
- The pain is at first diffuse and poorly localized. As appendiceal inflammation increases, the pain changes and then can be localized clearly to one small area. Generally, this area is between the front of the right hip bone and the belly button (McBurney's point).
- Also include fever, Nausea, vomiting, and anorexia are usually present.

Continue

- Physical examination reveals slight abdominal muscular rigidity (guarding), normal bowel sounds, and local rebound tenderness (intensification of pain when pressure is released after palpation) in the right lower quadrant of the abdomen. . The patient may keep the right leg flexed for comfort and experience increased pain if the leg is straightened

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- Rupture appendix cause abdominal distention develop from paralytic ileus.
- Inability to pass flutes
- Pain full urination and sever cramp

Diagnostic evaluation

- Complete physical examination.
- Abdominal x-ray.
- Ultrasound
- Complete blood count
- CT scan
- Rectal exam
- Urine test

Physical examination examination

- Assess for positive **psoas sign** by having the patient attempt to raise the right thigh against the pressure of your hand placed over the right knee. Inflammation of the psoas muscle in acute appendicitis will increase abdominal pain with this maneuver.
- Assess for positive **obturator sign** by flexing the patient's right hip and knee and rotating the leg internally. Hypo gastric pain with this maneuver indicates inflammation of the obturator muscle.

Treatment

- Antibiotics
- NPO
- Iv fluid
- Analgesics
- Antiemetics
- Surgery(appendicectomy) either open or laprascopic

Therapeutic Interventions

- The patient is kept NPO and surgery is done immediately unless there is evidence of perforation or peritonitis. Ice to the site of pain and maintaining semi-Fowler's position may help reduce pain while the diagnosis is being made. The patient is often readied for an appendectomy by emergency department staff.



If the appendix has ruptured, intravenous fluids and antibiotic therapy are started and surgery may be delayed for 8 hours or more. Laxatives and enemas are avoided because they may trigger or complicate a rupture. The use of a heating pad on the abdomen is avoided because the warmth may increase inflammation and risk of rupture.

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- After surgery, the patient is usually NPO until GI functioning returns, and if the appendix has ruptured, the patient may have an or gastric or nasogastric tube placed to decompress the stomach. When bowel function returns, the diet initially consists of clear fluids and is advanced as tolerated by the patient. Vital signs and abdominal data are collected to monitor for signs and symptoms of peritonitis. Pain control to promote early ambulation, coughing, deep breathing, and turning help prevent respiratory complications

- **How is an appendectomy done?**

During an appendectomy, an incision two to three inches in length is made through the skin and the layers of the abdominal wall in the area of the appendix. The surgeon enters the abdomen and looks for the appendix, usually located in the right lower abdomen



Laparoscopy

Laparoscopy is a surgical procedure wherein a small fiberoptic tube with a camera is inserted into the abdomen through a small puncture made on the abdominal wall. Laparoscopy allows a direct view of the appendix as well as other abdominal and pelvic organs. If appendicitis is found, the inflamed appendix can be removed at the same time. All this under general anaesthesia

Postoperative Management and Nursing Care

- Monitor vital signs for signs of infection and shock—fever, hypotension, tachycardia
- Assess abdomen for increased pain, distention, rigidity, and rebound tenderness because these may indicate postoperative complications. Report abnormal findings.
- Early ambulation

Complications

- Perforation, abscess of the appendix, and peritonitis are major complications of appendicitis.
- With perforation, the pain is severe and the temperature is elevated to at least 37.7C (100F).
- An abscess is a localized collection of pus separated from the peritoneal cavity by the omentum or small bowel. This is usually treated with parenteral antibiotics and surgical drainage. An appendectomy is done about 6 weeks later.

complication

- **Peritonitis** is inflammation of the peritoneum that occurs from Trauma, ischemia, or tumor perforation in any abdominal organ causes leakage of the organ's contents into the peritoneal cavity. The most common cause of peritonitis is a ruptured appendix, but it may also occur after perforation of a peptic ulcer, gangrenous gallbladder, intestinal diverticula, incarcerated hernia, or gangrenous small bowel. It may also be a complication of peritoneal dialysis.

peritonitis

- Signs and Symptoms Generalized abdominal pain evolves into localized pain at the site of the perforation or leakage. The area of the abdomen that is affected is extremely tender and aggravated by movement. Rebound tenderness and abdominal rigidity are present. Decreased peristalsis results in nausea and vomiting. Infection causes fever, increased white blood cells, and an elevated pulse.

Therapeutic Interventions of peritonitis

- Therapeutic Interventions The patient is NPO because of the impaired peristalsis.
- Fluid and electrolyte replacement is to correct hypovolemic.
- Abdominal distention is relieved through insertion of an orogastric (or nasogastric) tube with low intermittent suction. Antibiotics are used to treat or prevent sepsis. Depending on the cause of the peritonitis,
- surgery may be performed to excise, drain, or repair the cause. An ostomy may be formed to divert feces, allowing resolution of the infection. After surgery, the patient usually has a wound drain, a nasogastric (NG) tube, and a urinary catheter. Pain control.
- patients may receive total parenteral nutrition (TPN) to meet nutritional needs for increased immune function and healing.

Complications

- Complications of peritonitis are intestinal obstruction , hypervolemia caused by the shift of fluid into the abdomen, and septicemia from bacteria entering the bloodstream. Shock and ultimately death may result. Wound dehiscence or evisceration can occur if the patient has had abdominal surgery.



THANK YOU