

Care of patient with Appendicitis

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Abstract

Appendicitis is an acute inflammation of the appendix that can lead to an abscess, ileus, peritonitis, or death. Appendicitis is the most common abdominal surgical emergency, with a lifetime risk of approximately 3.18 per 1000 per year in 1st year, 4.17 per 1000 per year in second and 3.85 per 1000 per year in 3rd year. Hence, it remained almost stable during the study period of 3 years.

Keywords: Appendicitis, Acute, Inflammation, Appendix, Abscess, Death.

INTRODUCTION

Appendicitis is the swelling (inflammation) of the appendix. The appendix is a small, tube like organ attached to the large intestine. The condition is due to blockage inside the appendix. The blockage leads to increased pressure and inflammation. Appendicitis can occur at any age but it is more common during childhood and adolescence. Symptoms commonly include right lower abdominal pain, nausea, vomiting, and decreased appetite. Severe complications of a ruptured appendix include widespread, painful inflammation of the inner lining of the abdominal wall and sepsis. The standard treatment for acute

appendicitis is surgical removal of the appendix.

Defenition

“Appendicitis is a painful medical condition in which the appendix becomes inflamed and filled with pus, a fluid made up of dead cells and inflammatory tissue that often results from an infection.”

Causes and Risk Factors of Appendicitis

It's not always clear what causes appendicitis, and while there seems to be some correlation with a family history, there's no way to know if or when you might get appendicitis.

He condition often arises from one of two issues: A gastrointestinal infection (viral, bacterial, or fungal) that has spread to the appendix or an obstruction that blocks the opening of the appendix.

In the second case, there can be several different sources of blockage. These include:

- Lymph tissue in the wall of the appendix that has become enlarged.
- Hardened stool, parasites, or other growths.
- Irritation and ulcers in the gastrointestinal tract.

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- Abdominal injury or trauma.
- Foreign objects, such as pins, stones, or bullets.

Clinical Manifestation

Signs and symptoms of appendicitis may include:

- **Pain:** Vague epigastric or periumbilical pain progresses to right lower quadrant pain usually accompanied by low-grade fever, nausea, and sometimes vomiting.
- **Tenderness:** In 50% of presenting cases, local tenderness is elicited at McBurney's point when pressure is applied.
- **Rebound tenderness:** Rebound tenderness or the production or intensification of pain when pressure is released.
- **Rovsing's sign:** Rovsing's sign may be elicited by palpating the left lower quadrant; this paradoxically causes pain to be felt at the right lower quadrant.
- Nausea and vomiting
- Loss of appetite
- Low-grade fever that may worsen as the illness progresses
- Constipation or diarrhea
- Abdominal bloating
- Flatulence

Diagnostic Evaluation

Tests and procedures used to diagnose appendicitis include:

- **Physical exam to assess your pain:** Your doctor may apply gentle pressure on the painful area. When the pressure is suddenly released, appendicitis pain will often feel worse, signaling that the adjacent peritoneum is inflamed.
- **Blood test:** This allows your doctor to check for a high white blood cell count, which may indicate an infection.
- **Urine test:** Your doctor may want you to have a urinalysis to make sure that a urinary tract infection or a kidney stone isn't causing your pain.
- **Abdominal ultrasound:** Lets the doctor see internal organs as they work and checks how blood is flowing through different blood vessels.
- **CT scan:** Shows detailed images of any part

of the body, such as the bones, muscles, fat, and organs.

- **MRI:** Some times used to diagnose appendicitis, especially in a pregnant woman, instead of CT scan.

Complications

Appendicitis can cause serious complications, such as:

- **A ruptured appendix:** A rupture spreads infection throughout your abdomen (peritonitis). Possibly life-threatening, this condition requires immediate surgery to remove the appendix and clean your abdominal cavity.
- **A pocket of pus that forms in the abdomen:** If your appendix bursts, you may develop a pocket of infection (abscess). In most cases, a surgeon drains the abscess by placing a tube through your abdominal wall into the abscess. The tube is left in place for about two weeks, and you're given antibiotics to clear the infection.

MANAGEMENT

Medical Management

Medical management should be performed carefully to avoid altering the presenting symptoms.

- **IV fluids:** To correct fluid and electrolyte imbalance and dehydration, IV fluids are administered prior to surgery.
- **Antibiotic therapy:** To prevent sepsis, antibiotics are administered until the surgery is performed.
- **Drainage:** When perforation of the appendix occurs, an abscess may form and the patient is initially treated with antibiotics and the surgeon may place a drain in the abscess.

Surgical Management

The appendix may be removed in an open procedure or using laparoscopy:

1. **Open (traditional) surgery method:** You are given anesthesia. A cut (incision) is made in the lower right hand side of your belly. The surgeon finds the appendix and takes it out. If the appendix has burst, a small tube (shunt) may be placed to drain out pus and other fluids in the belly. The shunt will be taken out in a few days, when your surgeon feels the infection has gone away.

2. **Laparoscopic method:** You are given anesthesia. This surgery uses several small cuts (incisions) and a camera (laparoscope) to look inside your belly. The surgical tools are placed through a few small incisions. The laparoscope is placed through another incision. A laparoscopy can often be done even if the appendix has burst.

Nursing Management

- Assessing and relieving pain through medication administration as well as non-pharmacologic interventions.
- **Important:** do not apply heat to the appendicitis patient's abdomen as this could lead to rupture.
- **Prevent fluid volume deficit:** If tolerated and the patient is not NPO, oral fluid intake should be encouraged, and in take and output recorded.
- **Prevent infection:** Maintain a clean environment, provide wound care to the postoperative patient, and assess incision frequently for signs of infection. Monitor patient temperature and heart rate for signs of potential infection. Administer antibiotics as prescribed by the provider.
- Reduce patient anxiety by keeping the patient informed of the plan of care and ensure the patient is aware of diagnosis and treatment options.
- Encourage patients to walk as able/ permitted to maintain circulation. If the patient is immobile, the use of serial compression devices (SCD) and TED hose should be implemented to avoid DVT/ clots.
- **Monitor for adequate bowel movements:**

Opioids can be necessary for pain control, but they often lead to constipation. Encourage adequate water in take and use of a stool softener.

CONCLUSION

Appendicitis has been studied and treated for over a century. Diagnosis is based on imaging findings and clinical presentation. Currently, CT and graded compression color Doppler ultrasonography are generally employed to aid in the diagnosis. MRI has shown great promise as an alternative, with the added advantage of avoiding radiation exposure. Treatment is currently based on surgical intervention although future research looks to focus on more conservative measures such as antibiotics or other modalities. Antibiotic treatment has demonstrated efficacy in the short term but recurrence is likely in the long term. Some newer modalities of treatment have made it possible to forgo surgery by employing endoscopic intervention. Surgical advances with the use of laparoscopy enable same-day discharges, lower cost, fewer complications, and shorter recovery times.

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