

1

Case Study

Recurrent /Acute Appendicitis

Clinical Introduction

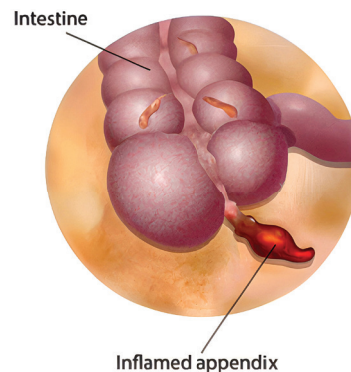
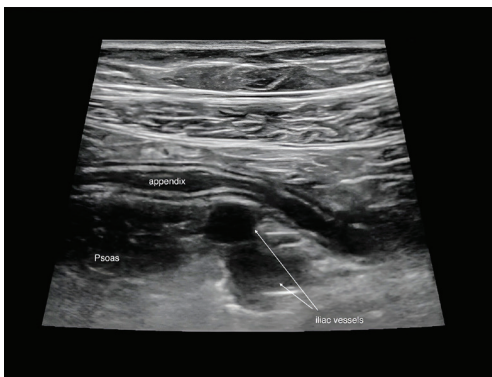
Appendicitis is inflammation of the appendix, often leading to acute abdominal pain, particularly in the lower right quadrant. Recurrent appendicitis refers to multiple episodes of this inflammation, sometimes resolved temporarily without surgery.

Clinical symptoms

Include right lower quadrant abdominal pain, fever, nausea, and possibly vomiting.

Pathological Findings

Elevated white blood cell (WBC) count, and possibly elevated C-reactive protein (CRP) levels indicating inflammation.



USG Report Indication

R.I.F : Probe Tenderness seen in RIF Son graphically no appendicular mass or collection seen.
OTHERS : Mildly Thickened wall Distended Bowel Loops seen in abdominal cavity with Slow peristalsis Motion No Ascites. no Lymph Adenopathy. No pleural effusion seen on either side.

Impression

Mildly Thickened Wall Distended Bowel Loops With tender RIF --? Appendicitis
Adv : Further Work Up /Other Investigation

2

Case Study

Appendicular lump

Clinical Introduction

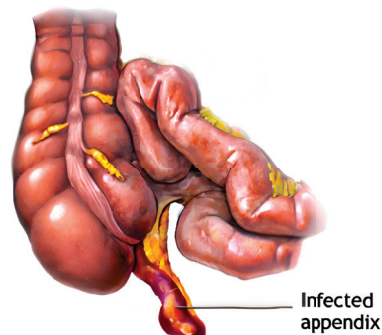
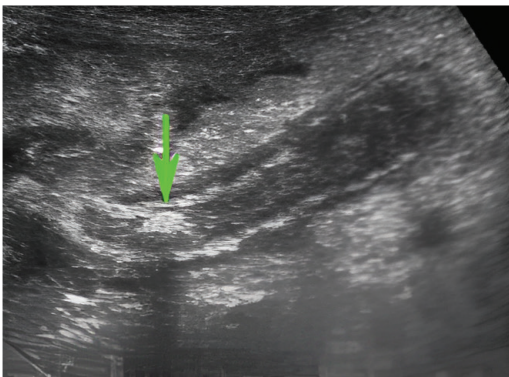
An appendicular lump is a localized mass formed due to inflammation and adhesion of the appendix to surrounding tissues, usually occurring after an episode of untreated or partially treated appendicitis.

Clinical symptoms

Include right lower quadrant pain, a palpable mass, and possibly low-grade fever

Pathological Findings

Elevated white blood cell (WBC) count, and possibly elevated C-reactive protein (CRP) levels indicating inflammation.



USG Report Indication

R.I.F. : A Hypo echoic Elongated blunt tubular structure measures 4.1×1.6 cm seen in RIF with fecalith appearance with Probe Tenderness suggested -- ? Inflamed Appendicular lump

Impression

A Hypo echoic Elongated blunt tubular structure in RIF with Probe Tenderness with fecalith appearance -- ? Inflamed Appendicular lump with fecalith

Adv : Further Work Up / Other Investigation

3

Case Study

Perforated Appendicular lump

Clinical Introduction

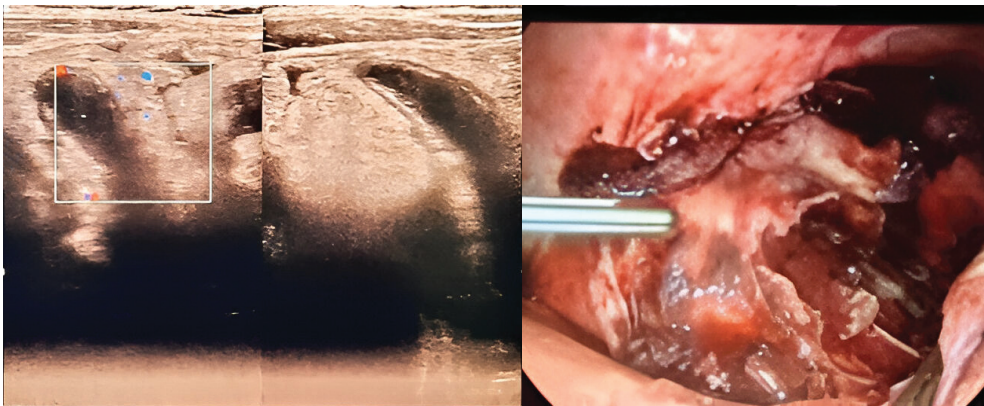
A perforated appendicular lump occurs when an inflamed appendix ruptures, leading to localized infection and abscess formation, typically requiring urgent medical or surgical intervention.

Clinical symptoms

Include right lower quadrant pain, a palpable mass, and possibly low-grade fever include severe right lower quadrant pain, fever, signs of sepsis, and possibly a palpable mass.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP) levels, and possibly elevated serum lactate indicating sepsis.



USG Report Indication

R.I.F : A Hypo echoic Elongated blunt Edematous tubular structure measures 5.8×6.3 cm seen in RIF with surrounding echogenic collection & Probe Tenderness suggested -- ? Inflamed edematous Rupture Appendicular lump.

Impression

A Hypo echoic Elongated edematous blunt tubular structure in RIF with Probe Tenderness and surrounding echogenic collection. -- ? Inflamed edematous rupture Appendicular lump

Adv : Further Work Up /Other Investigation

4

Case Study

Appendicular Abscess

Clinical Introduction

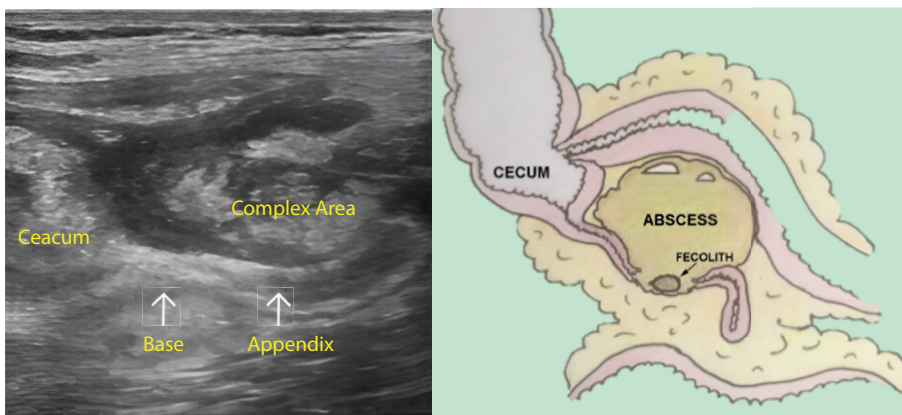
An appendicular abscess is a collection of pus around a perforated or inflamed appendix. It often presents with fever, localized abdominal pain, and signs of sepsis.

Clinical symptoms

include right lower quadrant pain, fever, chills, and possibly signs of sepsis.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP) levels, and possibly elevated serum lactate if sepsis is present.



USG Report Indication

R.I.F. : A Hypo echoic Edematous Elongated blunt tubular structure measures 5.74×2.11 cm seen in RIF with Probe Tenderness and Mild amount of peri Appendicular collection suggested -- ? Inflamed Edematous Rupture Appendicular lump with peri appendicular Abscess

Impression

A Hypo echoic Edematous Elongated blunt tubular structure in RIF with Probe Tenderness and Peri Appendicular Echogenic Collection - ? Inflamed Edematous Rupture Appendicular lump with peri appendicular Abscess.

Adv : Further Work Up/other Investigation

5

Case Study

Hypertrophic Pylorus Stenosis

Clinical Introduction

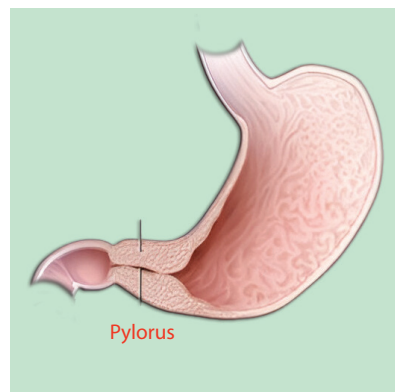
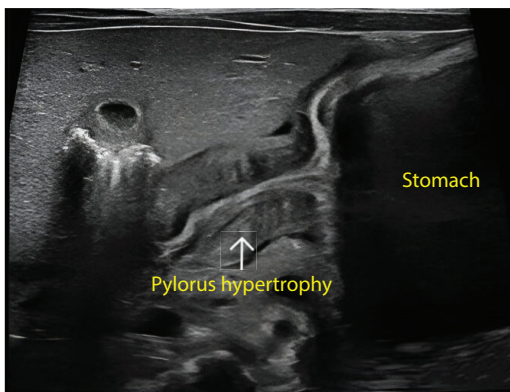
Hypertrophic pyloric stenosis is a condition in infants where the pyloric muscle thickens, obstructing the passage of food from the stomach to the small intestine, leading to projectile vomiting and weight loss.

Clinical symptoms

Include projectile vomiting (non-bilious), dehydration, and a palpable “olive-shaped” mass in the upper abdomen, typically seen in infants.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP) levels, and possibly elevated serum lactate if sepsis is present. Electrolyte imbalances such as hypochloremia, hypokalemia, and metabolic alkalosis due to prolonged vomiting.



USG Report Indication

Pylorus : The pyloric muscle is hypertrophied, measuring approximately 6.3 mm (normal < 3 mm). The pyloric canal is elongated, measuring approximately 23 mm (normal < 15-18 mm). There is significant narrowing of the pyloric canal with little to no passage of gastric contents into the duodenum. Active peristalsis is noted with visible “caterpillar sign” (waves of peristaltic activity) but without effective passage of stomach contents.

Impression

The hypertrophy and elongation of the pyloric muscle are causing significant gastric outlet obstruction-? Hypertrophic Pylorus stenosis.

Adv : Further Work Up /Other Investigation

6

Case Study

Partially Sub Acute Bowel Obstruction

Clinical Introduction

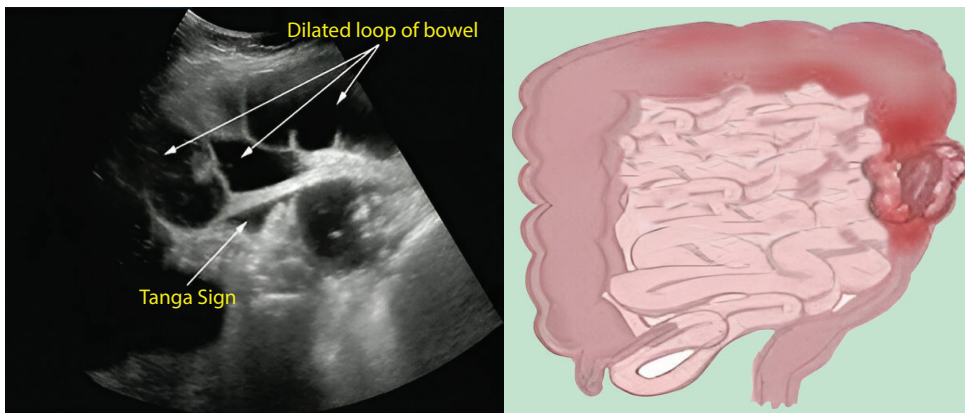
A partially subacute bowel obstruction refers to a partial blockage of the intestines, which causes intermittent abdominal pain, bloating, and altered bowel habits.

Clinical symptoms

Include intermittent abdominal pain, bloating, nausea, vomiting, and changes in bowel habits (e.g., constipation or diarrhea)

Pathological Findings

Typically normal or slightly altered electrolytes depending on the degree of obstruction and fluid loss.



USG Report Indication

Partially Fluid Filled Distended Bowel Loops seen in abdominal cavity with Excess bowel Gasses Suggested - ? Partially Sub Acute Bowel Obstruction.

Impression

Partially Fluid filled Distended Bowel Loops with Excess Bowel Gasses -? Partially Sub Acute Bowel Obstruction.

Adv : Further Work Up, X-Ray Abdomen Erect posture / Other Investigation

7

Case Study

Complete Bowel Obstruction

Clinical Introduction

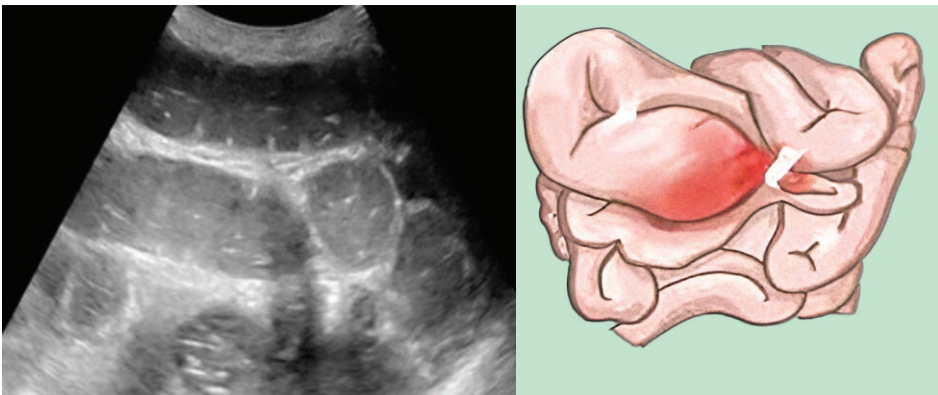
Complete bowel obstruction is a medical emergency where the bowel is entirely blocked, preventing the passage of food, liquids, and gas, often requiring urgent surgical intervention.

Clinical symptoms

Include severe abdominal pain, distention, vomiting (often bilious), inability to pass gas or stool, and signs of dehydration.

Pathological Findings

Electrolyte imbalances such as hypokalemia, metabolic alkalosis, and elevated blood urea nitrogen (BUN) and creatinine levels due to dehydration.



USG Report Indication

Echogenic Fluid Filled Distended Bowel Loops seen in abdominal cavity with Excess bowel Gasses Suggested – ? Complete Bowel Obstruction.

Impression

Echogenic Fluid filed Distended Bowel Loops with Excess Bowel Gasses -? Complete Bowel Obstruction.

Adv : Further Work Up, X-Ray Abdomen Erect posture / Other Investigation.

8

Case Study

Anastomotic leakage Bowel perforation

Clinical Introduction

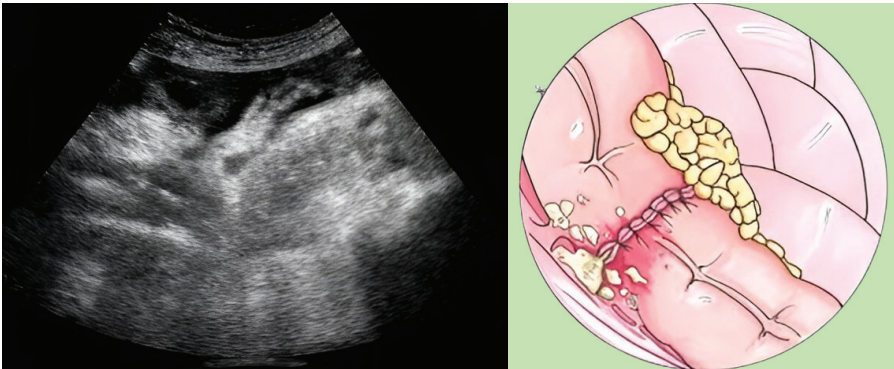
An anastomotic leak occurs when there is a breakdown in the surgical connection of the intestines, leading to bowel perforation and potentially life-threatening sepsis.

Clinical symptoms

Include severe abdominal pain, fever, signs of sepsis, and abdominal distention.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly elevated serum lactate indicating sepsis.



Others: Distended and dilated bowel loops are noted with loss of normal peristalsis, suggestive of ileus or obstruction. Moderate to large amounts of free fluid are seen in the abdominal cavity, particularly around the anastomotic site, with echogenic debris indicating the presence of infected fluid or pus. The anastomotic site appears irregular with disruption of the bowel wall continuity, suggestive of leakage. Free intraperitoneal air is observed, particularly in the subdiaphragmatic area, consistent with bowel perforation. Thickened with evidence of localized peritonitis in the region of the anastomotic leak.

Impression

Findings suggestive of Anastomotic Leakage with Bowel Perforation, with free intraperitoneal fluid and air.

Adv : Further Work Up, X-Ray Abdomen Erect posture / Other Investigation

9

Case Study

Complete Bowel perforation

Clinical Introduction

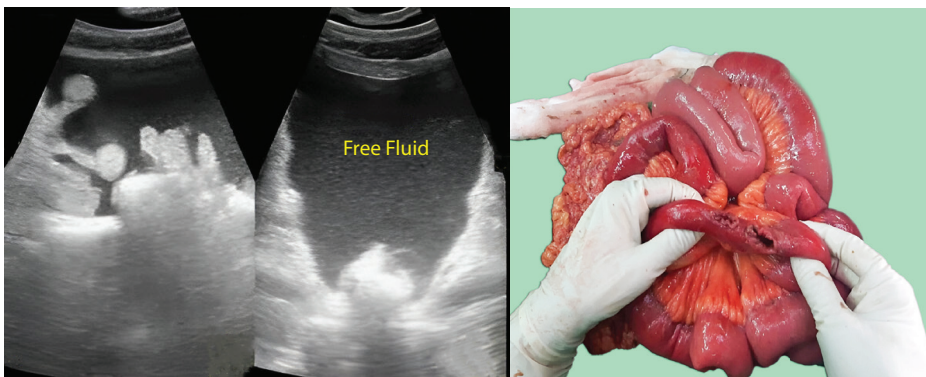
Complete bowel perforation involves a full-thickness breach of the bowel wall, leading to leakage of intestinal contents into the abdominal cavity, resulting in peritonitis.

Clinical symptoms

Include sudden, severe abdominal pain, signs of peritonitis (rigid abdomen, tenderness), fever, and potentially signs of sepsis.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and elevated serum lactate indicating sepsis.



Others: Dilated bowel loops with thickened walls are noted, suggestive of underlying inflammation or obstruction. A significant amount of free fluid is seen in the peritoneal cavity, with echogenic debris indicating the presence of contaminated fluid or pus. Numerous free intraperitoneal air pockets are observed, particularly in the subdiaphragmatic area and throughout the abdomen, strongly indicative of a complete bowel perforation. The peritoneum appears thickened and inflamed, consistent with generalized peritonitis.

Impression

Findings consistent with Complete Bowel Perforation, with free intraperitoneal air and fluid.

Adv : Further Work Up, X-Ray Abdomen Erect posture / Other Investigation

10

Case Study

IBD (Inflammatory Bowel diseases)

Clinical Introduction

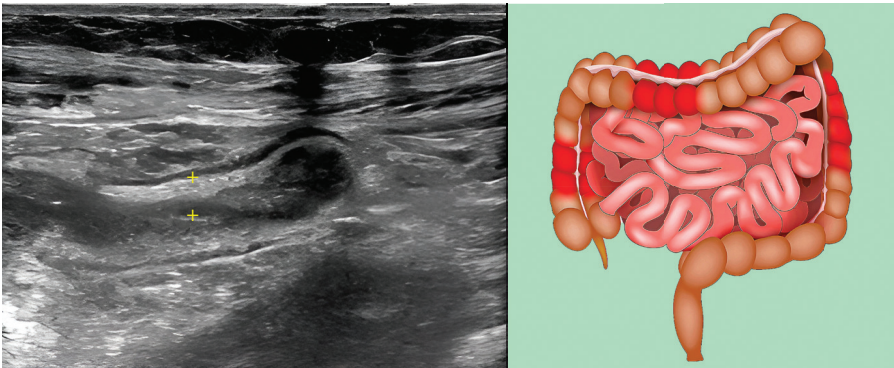
Inflammatory bowel disease (IBD) encompasses conditions like Crohn's disease and ulcerative colitis, both of which involve chronic inflammation of the gastrointestinal tract, causing abdominal pain, diarrhea, and malnutrition.

Clinical symptoms

Abdominal pain, diarrhea (often bloody), weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Thickened wall Distended Bowel Loops seen in abdominal cavity with slow peristalsis motion. No evidence of fistulas or abscesses is noted. However, some bowel loops show increased vascularity on Doppler imaging.

Impression

Thickened wall Distended Bowel Loops seen in abdominal cavity with slow peristalsis motion
-? IBD

Adv : Further work up and other investigation

11

Case Study

Crohn's Disease

Clinical Introduction

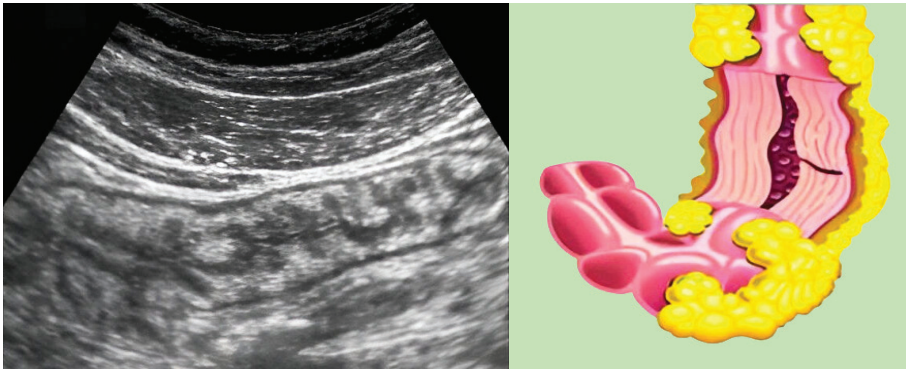
Crohn's disease is a form of IBD that can affect any part of the gastrointestinal tract, characterized by patchy areas of inflammation, leading to abdominal pain, diarrhea, and weight loss.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Bowel Wall: Thickened bowel wall noted, particularly in the terminal ileum, with evidence of increased vascularity (hyperemia).

Mesenteric Fat: Prominent fat proliferation observed.

Complications: Possible presence of a small abscess/fistula tract.

Impression

Findings are consistent with Crohn's Disease, with evidence of active inflammation and potential complications such as abscess or fistula.

Adv : Further workup and CE CT ABDOMEN / other investigation

12

Case Study

Appendicular lump

Clinical Introduction

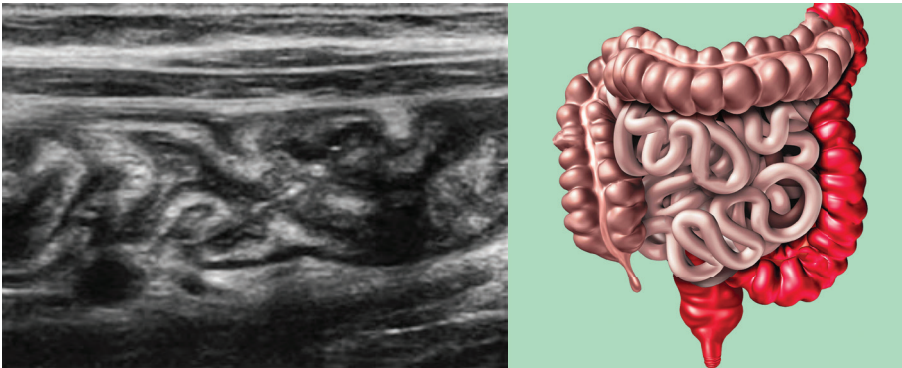
Ulcerative Colitis is a chronic condition causing inflammation and ulcers in the colon, leading to symptoms like bloody diarrhea, abdominal pain, and urgency. Ultrasound helps assess bowel wall thickening and disease extent.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia



USG Report Indication

Bowel Wall: Diffuse thickening of the colonic wall, predominantly in the rectosigmoid region.

Vascularity: Increased vascularity seen on Doppler.

No evidence of toxic megacolon or perforation.

Impression

Findings are consistent with active Ulcerative Colitis.

Adv : Further workup and CE CT ABDOMEN / other investigation

13

Case Study

Colitis

Clinical Introduction

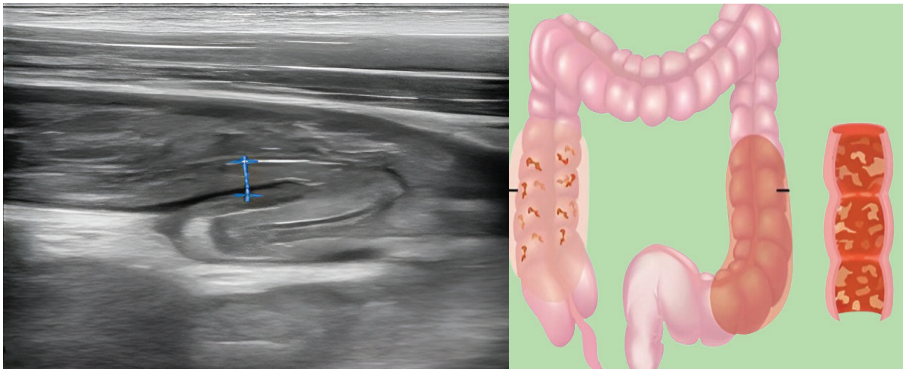
Colitis is inflammation of the colon, presenting with symptoms such as abdominal pain, diarrhea, and sometimes fever. Ultrasound can detect bowel wall thickening and signs of active inflammation.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Bowel Wall: Focal thickening of the colonic wall noted, particularly in the descending colon.

Surrounding Fat: Mild stranding noted, suggestive of inflammation.

No abscess formation observed.

Impression

Findings suggest acute colitis, likely inflammatory in nature.

Adv : Further workup and CE CT ABDOMEN / other investigation

14

Case Study

Irritable Bowel Syndrome (IBS)

Clinical Introduction

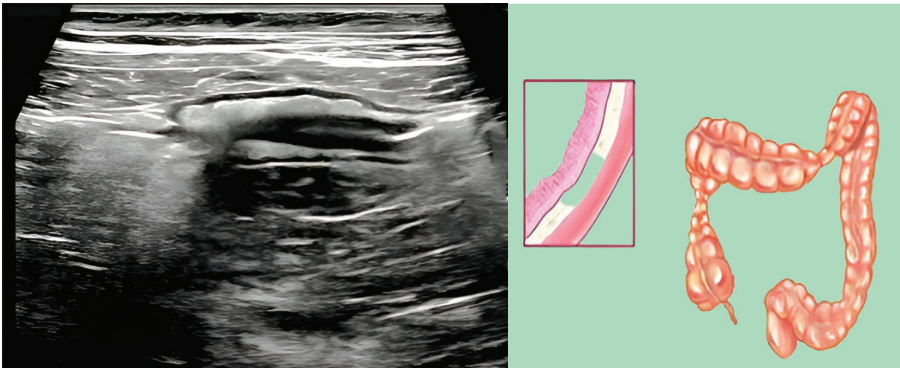
IBS is a functional gastrointestinal disorder characterized by chronic abdominal pain, bloating, and altered bowel habits, such as diarrhea or constipation. Ultrasound is used mainly to exclude other causes of symptoms.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Bowel Wall: No significant thickening or abnormality observed.

Peristalsis: Normal.

No evidence of structural abnormalities.

Impression

Ultrasound findings are unremarkable, consistent with a diagnosis of Irritable Bowel Syndrome after excluding other conditions.

Adv : Further workup and CE CT ABDOMEN / other investigation

15

Case Study

Gastroenteritis

Clinical Introduction

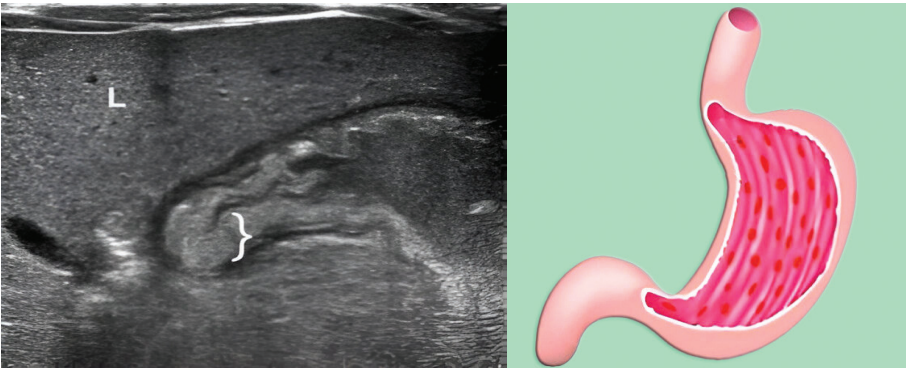
Gastroenteritis involves inflammation of the stomach and intestines, often causing nausea, vomiting, diarrhea, and abdominal cramps. Ultrasound may show nonspecific findings like bowel wall thickening.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Bowel Wall: Mild thickening of small bowel loops noted.

Peristalsis: Increased peristaltic activity.

No fluid collections or abscesses detected.

Impression

Findings are suggestive of mild gastroenteritis.

Adv : Further workup and CE CT ABDOMEN / other investigation

16

Case Study

Diverticula

Clinical Introduction

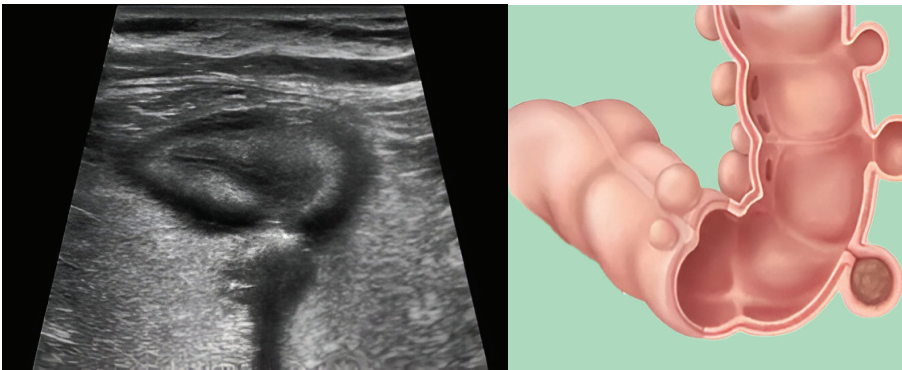
Diverticula are small pouches in the colon that can become inflamed, leading to diverticulitis, with symptoms of abdominal pain, fever, and changes in bowel habits. Ultrasound can identify inflamed diverticula.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Bowel Wall: Presence of outpouchings noted in the sigmoid colon consistent with diverticula.

Surrounding Fat: Evidence of fat stranding, indicating inflammation.

No abscess formation identified.

Impression

Findings are consistent with diverticulitis in the sigmoid colon.

Adv : Further workup and CE CT ABDOMEN / other investigation

17

Case Study

Rectus Sheath Hematoma

Clinical Introduction

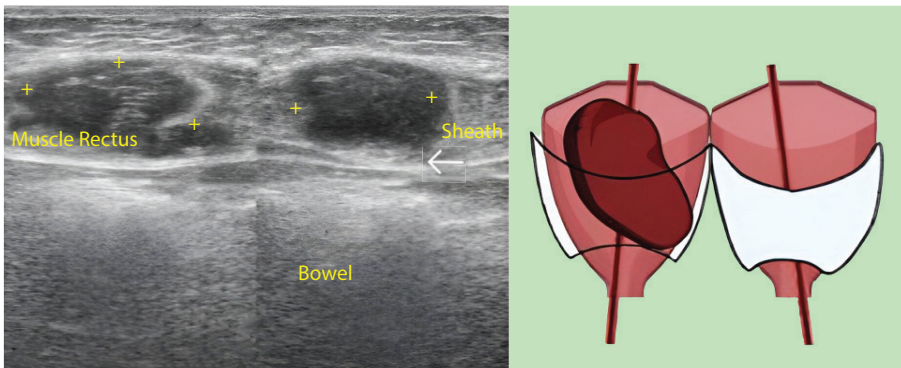
A Rectus Sheath Hematoma is a collection of blood within the rectus abdominis muscle, often due to trauma, presenting with acute abdominal pain and a palpable mass. Ultrasound can detect the hematoma.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Rectus Sheath: Hypochoic to mixed echogenicity mass measuring [size] cm noted within the rectus sheath.

No active bleeding detected.

Impression

Findings are consistent with a Rectus Sheath Hematoma.

Adv : Further workup and CE CT ABDOMEN / other investigation

18

Case Study

Inguinal Hernia

Clinical Introduction

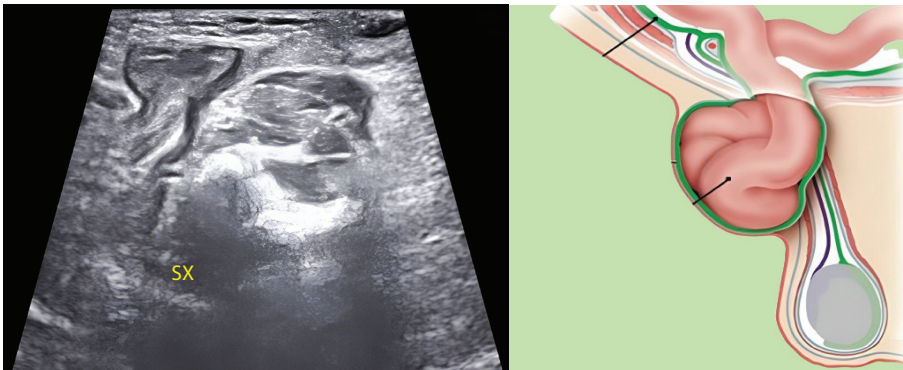
An Inguinal Hernia occurs when abdominal contents protrude through the inguinal canal, causing a bulge in the groin and sometimes pain. Ultrasound is effective in diagnosing and assessing the hernia.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Hernial Sac: Fat-containing hernia with bowel loops noted entering the inguinal canal.

Reducibility: Reducible with patient maneuver.

No signs of incarceration or strangulation.

Impression

Inguinal hernia detected, containing fat and bowel, but reducible.

Adv : Further workup and CE CT ABDOMEN / other investigation

19

Case Study

Femoral Hernia

Clinical Introduction

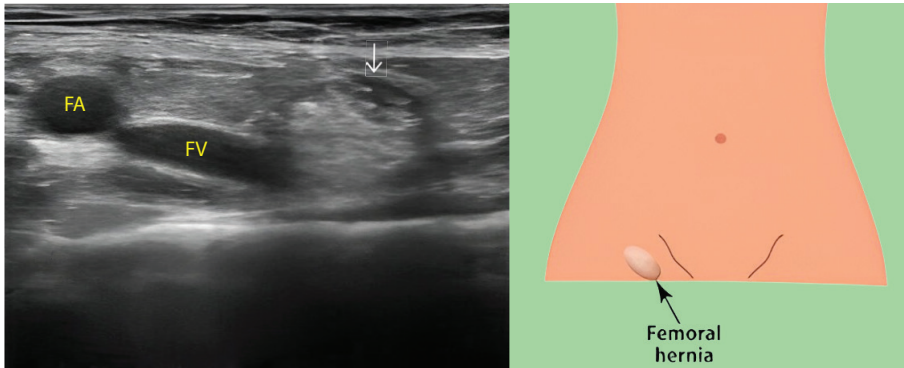
A Femoral Hernia, more common in women, involves abdominal contents passing through the femoral canal, presenting with a groin bulge and pain, especially when standing or straining. Ultrasound helps in distinguishing it from other types of hernias.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Hernial Sac: Small bowel loop identified within the femoral canal.

No signs of incarceration or strangulation.

Vascularity: Normal.

Impression

Findings are consistent with a Femoral Hernia.

Adv : Further workup and CE CT ABDOMEN / other investigation.

20

Case Study

Incisional Hernia

Clinical Introduction

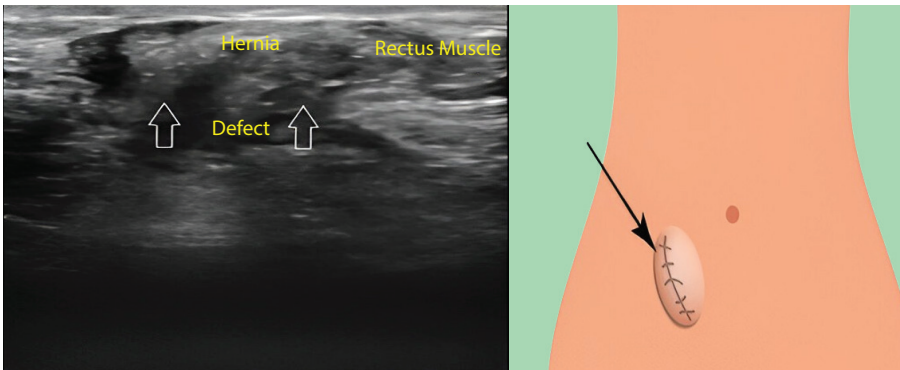
An Incisional Hernia develops at the site of a previous surgical incision, presenting as a bulge near the scar and possibly pain or discomfort. Ultrasound is useful for detecting the herniation of abdominal contents.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Hernial Sac: Omental fat and possibly small bowel loops herniating through a defect at the previous surgical site.

Defect Size: Approximately [size] cm.

No evidence of strangulation.

Impression

Incisional hernia detected at the site of the previous surgery.

Adv : Further workup and CE CT ABDOMEN / other investigation

21

Case Study

Umbilical Hernia

Clinical Introduction

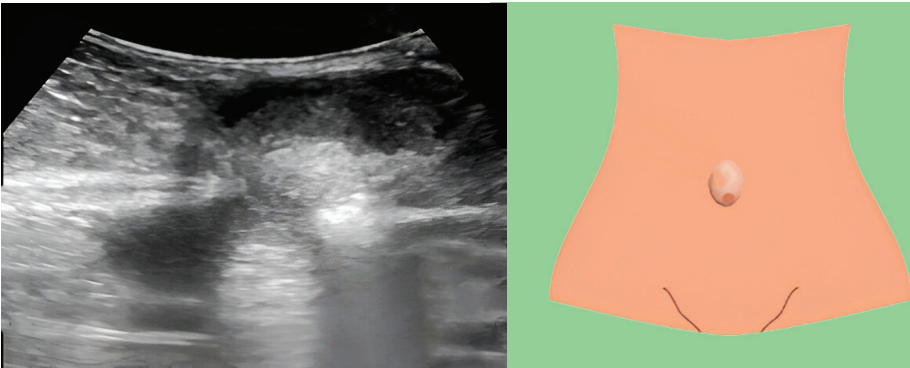
An Umbilical Hernia is a bulge at the navel, often seen in infants but also in adults, which may cause pain or discomfort. Ultrasound can identify the herniated contents and assess the size of the defect.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.



USG Report Indication

Hernial Sac: Small bowel loop noted within the hernia sac near the umbilicus.

Reducibility: Reducible with gentle pressure.

No signs of strangulation or incarceration.

Impression

Umbilical hernia identified with reducible small bowel content.

Adv : Further workup and CE CT ABDOMEN / other investigation.

22

Case Study

Linea Alba Hernia / Epigastric Hernia

Clinical Introduction

A Linea Alba or Epigastric Hernia occurs through the midline of the abdomen, often presenting with a small, painful bulge. Ultrasound helps in diagnosing these small hernias that may not be easily palpable.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.

USG Report Indication

Hernial Sac: Small defect in the midline abdominal wall with preperitoneal fat herniating through.

No bowel loops involved.

No signs of strangulation.

Impression

Small epigastric hernia detected along the linea alba.

Adv : Further workup and CE CT ABDOMEN / other investigation.

23

Case Study

Spigelian Hernia

Clinical Introduction

A Spigelian Hernia occurs along the Spigelian fascia, causing a lateral abdominal bulge with pain, often missed during a physical exam. Ultrasound is key in diagnosing this type of hernia.

Clinical symptoms

Abdominal pain, diarrhea, weight loss, and fatigue.

Pathological Findings

Elevated white blood cell (WBC) count, elevated C-reactive protein (CRP), and possibly anemia.

USG Report Indication

Hernial Sac: Bowel loop identified herniating through the Spigelian fascia.

Reducibility: Reducible with patient maneuver.

No signs of strangulation.

Impression

Spigelian hernia identified, containing a bowel loop.

Adv : Further workup and CE CT ABDOMEN / other investigation