



Appendicitis

Acute appendicitis

- Acute inflammation of the vermiform appendix.
- It is the most common cause of abdominal emergency in both adults as well as children.

Acute appendicitis

Etiopathogenesis:

Children:

- ❑ Lymphoid hyperplasia (60% of cases) often secondary to viral infection. Virus like:
 - Adenovirus
 - measles virus infection or immunization.

Acute appendicitis

Etiopathogenesis:

Adults:

- ❑ Fecalith obstructs the proximal lumen so Increased intraluminal pressure causes mucosal injury and bacterial invasion in appendix.
- ❑ Other causes are Gallstones, , Tumors, Mass of worms (oxyuriasis vermicularis) etc.

Acute appendicitis

Pathogenesis:

- Initiated by: progressive increases in intraluminal pressure that compromise venous outflow
- Stasis of luminal contents - favors bacterial proliferation, triggers ischemia and inflammatory responses,
- Finally results in tissue edema and neutrophilic infiltration in lumen, muscular wall as well as periappendiceal soft tissues.

Gross- morphology

- Normal glistening serosa becomes dull, granular and erythematous
 - Fibrinous or purulent coating of serosa
 - Engorgement of subserosal vessels
 - Mucosal ulceration
 - Gangrenous: greenish black covered with exudate
- Obstruction of lumen by Fecolith or some other agent in nearly 25-33% of cases.



Microscopy : Stages

- Early Acute Appendicitis
- Acute Suppurative Appendicitis
- Acute Gangrenous Appendicitis

Microscopy

Early lesions (Early Acute Appendicitis):

- Modest perivascular neutrophilic infiltrate within all layers of wall with Congested subserosal vessels

Later stages (Acute Suppurative Appendicitis):

- Prominent neutrophilic exudate
- Abscess formation, Ulceration, Suppurative necrosis in mucosa can be seen.

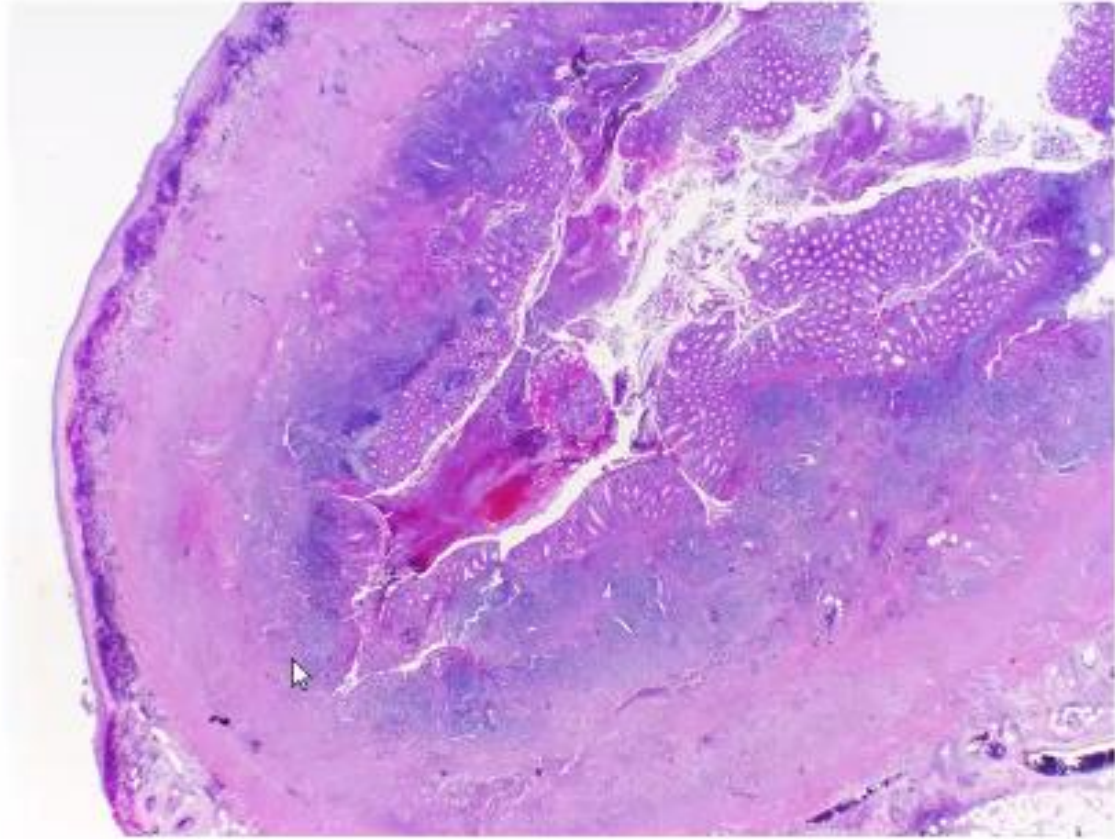
Acute Gangrenous Appendicitis:

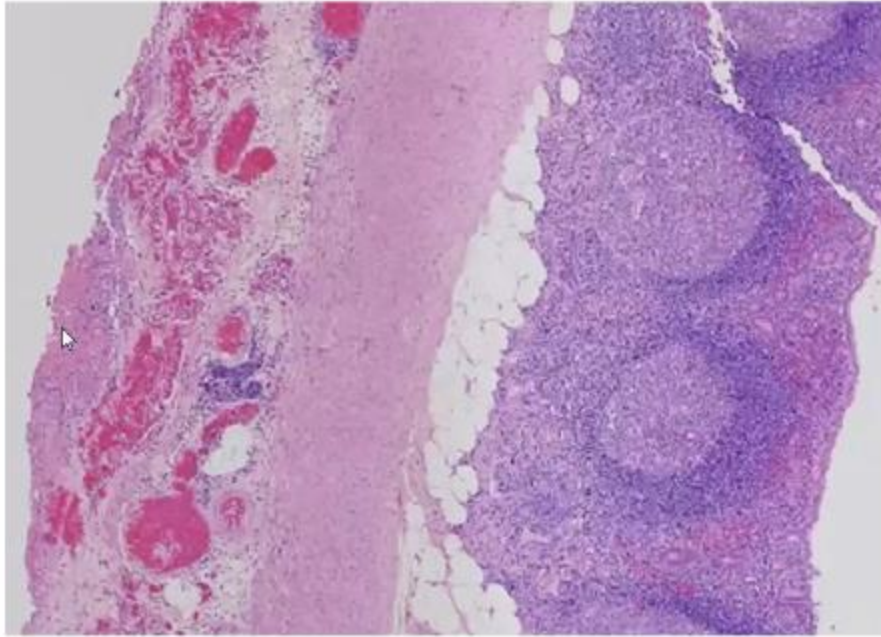
- Mucosal ulceration
- Gangrenous necrosis throughout the wall

Diagnosis of acute appendicitis must
requires neutrophilic infiltration in
muscularis propria.

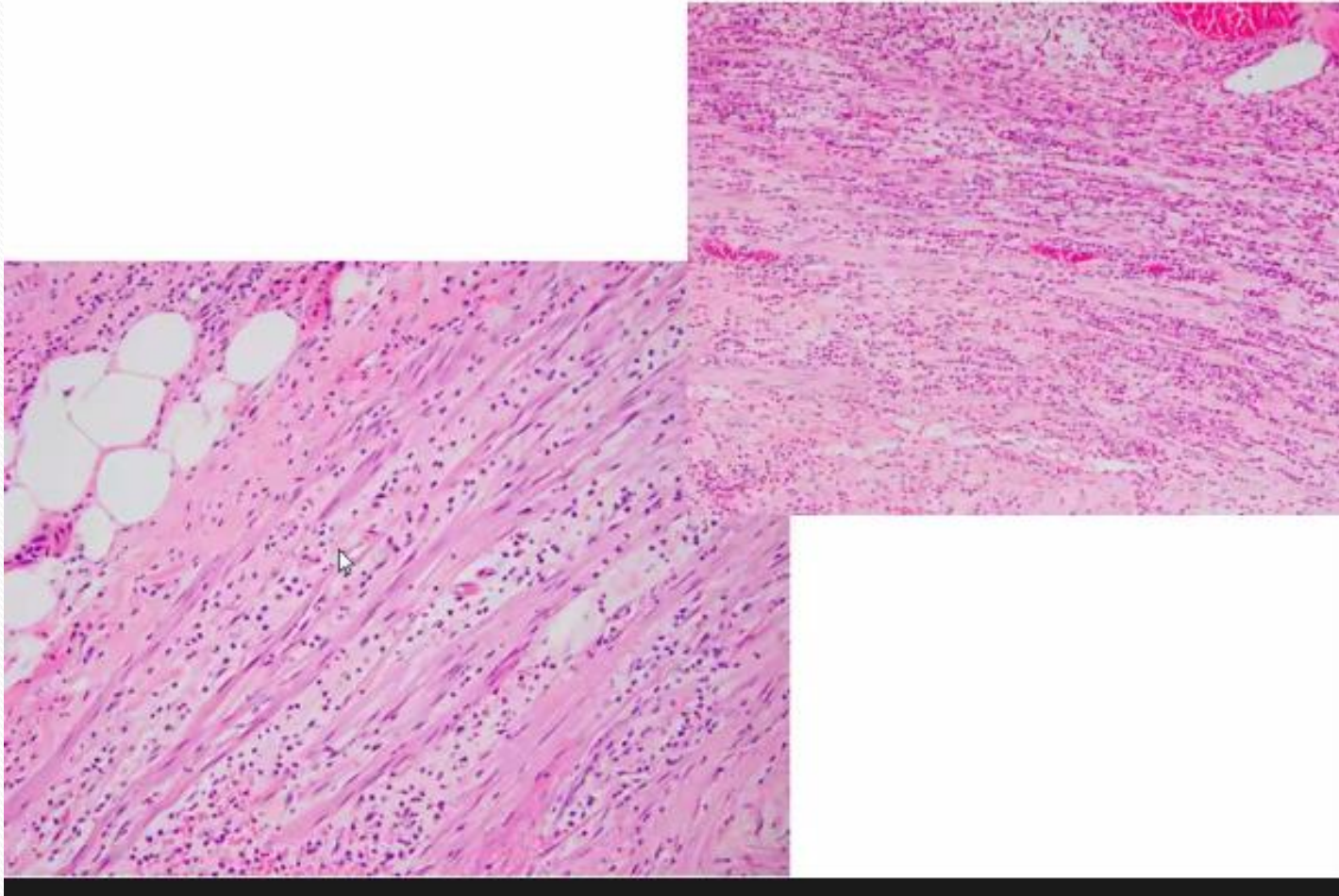
Microscopic

- Sometimes a prominent histiocytic component with clusters of xanthoma-type cells can be seen in microscopy:
xanthogranulomatous appendicitis





Neutrophilic Infiltration of wall



Complications are:

- Perforation of wall
- Peritonitis
- Fibrosis
- Hemorrhage
- Appendicular abscess
- Fistula tract
- Septicaemia etc.

- **McBurney's sign:** It is a physical examination of **deep tenderness** located two-thirds of the distance from the umbilicus to the right anterior superior iliac spine (McBurney's point).