Appendicitis and Beyond

An update on appendicitis and a review of the article Beyond Appendicitis
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Beyond Appendicitis: Common and Uncommon Gastrointestinal Causes of Right Lower Quadrant Abdominal Pain at Multidetector CT

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CT Acute Appendicitis

Older literature:
appendix > 6mm, abnormal

Newer Articles:
Webb, et al Emer Rad 2009

40 % of Asymptomatic patients
Appendix > 6mm
Isolated appendiceal enlargement, no other signs; significance?

- If < 6mm, 0% appendicitis
- If < 9mm, 13% appendicitis
- If >= 9mm, 51% appendicitis
- Suggests upper limit normal appendix should be 9mm
Acute Appendicitis: 6-9 mm range, secondary signs

- Intraluminal fluid >2.6mm highly sensitive for appendicitis
- Look for other signs: wall thickening, wall enhancement, periappendiceal fluid & fat stranding
Pitfalls: Non-visualized Appendix

- No secondary signs = essentially excludes appendicitis
- Secondary signs (stranding and/or fluid)
  Appendicitis 44%
Pitfalls: Stump Appendicitis

- Hx of prior appendectomy
- Residual appendix left behind
- Increasing incidence with laparoscopic surgeries
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- Crohn’s Disease
- Infectious Enterocolitis
- Neutropenic Colitis
- Diverticulitis
- Meckel Diverticulitis
- Epiploic Appendagitis
- Omental Infaction
- Mesenteric Adenitis
- Intussusception
- Ischemic Colitis
Crohn’s disease in a 23-year-old woman with RLQP and fever.

- Thick walled terminal ileum
- Mucosal enhancement
- Fibrofatty proliferation
- Fistulas
Infectious ileitis in a 32-year-old man with RLQP, fever, and bloody diarrhea.
Neutropenic colitis (typhlitis) in a 14-year-old girl with leukemia who presented with RLQP, diarrhea, and fever during the course of chemotherapy.
Diverticulitis

Right colonic diverticulitis

Ileal diverticulitis
Meckel diverticulitis in a 35-year-old man with nausea, vomiting, and periumbilical pain.

- Blind ending sac
- 100 cm from ileocecal valve
- Antimesenteric border

Meckel diverticulitis in a 35-year-old man with nausea, vomiting, and periumbilical pain.
Epiploic Appendagitis

- Round fat-containing peritoneal pouches
- Sigmoid > right colon
- Ischemia due to torsion
- Oval lesion with Hyperdense rim
- Central dot high density

Figure 14  Epiploic appendagitis. Axial noncontrast CT image shows an inflamed epiploic appendage (arrowhead) with surrounding inflammation and an otherwise normal appendix (arrow).
Epiploic Appendagitis
Acute omental infarction in a 40-year-old man with acute onset of RLQP after exercising.

- Torsion or venous thrombosis
- Primary or secondary
- Well-circumscribed, triangular or oval fatty mass
- Whorled concentric linear fat stranding
- Anterior wall/transverse colon=greater omentum

Acute omental infarction in a 40-year-old man with acute onset of RLQP after exercising.
Omental Infarction
Mesenteric Adenitis

- Clustered >3 nodes RLQ small bowel mesentery
- Primary = children
  Diagnosis of exclusion
- Secondary = adults

Mesenteric adenitis in a 19-year-old man with RLQP and low-grade fever.
Intussusception

ileal-ileal

ileal-cecal
Ischemic colitis in a 72-year-old man with RLQP after an episode of severe hypotension.

- **Left colon** > **right colon**
- **Early** = non specific bowel wall edema and thickening
- **Late** = Intramural gas, perforation
Other Considerations:

- Adenocarcinoma
- Lymphoma
- Volvulus
- Endometriosis
- PID
- Ovarian Torsion
- Renal Calculi
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