Case of the Month

December, 2015

Kate Hames, PGY2
Patient Presentation:

45 y/o M presents to ER with a 2 day history of vague abdominal pain now localized to the RLQ.

PMHx: GERD
DM 2

Physical exam: temp 38.1, HR 90, O2 98%
  tender to palpation in the RLQ
  + McBurney’s sign
  + rebound tenderness

Investigations: WBC 14
  urine negative
  all other blood work normal

CT ordered for further investigation. ?? Appendicitis
CT sequential axial images
CT coronal and sagittal images
Initial CT findings

The appendix is prominent and measures 8 mm in diameter.

There is surrounding fat stranding and trace free fluid in the pelvis. No free air. No abscess formation.

The terminal ileum and cecum are mildly thickened, which is favored to be reactive.

Diagnosis: Findings are in keeping with acute uncomplicated appendicitis.
CT sequential axial images

Incidental findings
CT sequential coronal images: Incidental findings
CT sequential coronal images: Incidental findings
CT Incidental Findings

In the RLQ, there is a 1.7 x 2 cm *small* bowel diverticulum proximal to terminal ileum

Findings compatible with non-inflamed Meckel's diverticulum
Meckel’s Diverticulum

- Congenital diverticulum near the distal ileum

- Remnant of the omphalomesenteric-vitelline duct, connecting the yolk sac to the umbilical cord (obliterated by week 5-8 gestation).

- True diverticulum comprised of all layers of the GI wall

- Lined with heterotopic mucosa:
  - gastric mucosa 62%
  - pancreatic 6%
  - gastric and pancreatic 5%
  - jejunal 2%
  - Brunner glands 2%
  - gastric and duodenal 2%
Meckel’s Diverticulum

Rule of 2s:

- Occurs in 2% of the population
- 2 feet from the ileocecal valve
- 2 inches long
- 2% become symptomatic
- 2/3 have ectopic mucosa
- 2 types of ectopic tissue most common: gastric and pancreatic
Meckel’s Diverticulum

Clinical presentation and complications:

- Often an incidental finding on CT
- Meckel’s diverticulitis
- Gastrointestinal hemorrhage
- Intussusception
- Volvulus
- Small bowel obstruction
Meckel’s Diverticulum

Radiographic features

CT: Often resembles a normal bowel loop, or an air or fluid filled blind-ending pouch arising off the distal ileum. Meckel’s diverticulitis presents with adjacent fat stranding, possible free fluid, and free air in the setting of perforation.

US: Limited, but may show a blind ended loop off the distal ileum.

Angiography: In the setting of GI bleed, angio may show a persistent omphalomesenteric artery, a branch arising from the ileal branch of the SMA

Scintigraphy: 99mTc-Na-pertechnetate (60% sensitivity) is taken up by gastric mucosa and may help identify Meckel’s diverticula comprised of ectopic gastric mucosa
Scintigraphy demonstrating uptake in the gastric mucosa in the stomach and Meckel’s diverticulum
Case conclusion:

- The patient underwent an emergency appendectomy.
- OR reports indicate the Meckel’s diverticulum was identified on laparoscopy, but showed no signs of inflammation or complication. The diverticulum was not resected.
- There were no surgical complications.
References


