Imaging for Crohn Disease

Newer Techniques

- CT
- CT Enteroclysis
- CT Enterography
Imaging for Crohn Disease

Newer Techniques

• CT
  – Widely used to evaluate for abscess
  – Mesenteric fatty proliferation
  – May show strictures but wall thickening difficult to assess due to variable distension
  – not as sensitive in delineating fissure or fistula as barium studies
  – superior to barium in showing the extraluminal sequelae of Crohns
Transverse CT image of normal rectosigmoid colon

When the lumen of the bowel is distended, the normal bowel wall thickness is 1–2 mm; when the lumen is collapsed, the normal thickness can reach 3–4 mm.
Wall thickening
SBO – Crohn Disease
Enteropathic Arthropathy

SacroIliitis – see in 10-20% of Crohns
Imaging for Crohn Disease

Newer Techniques

• CT Enteroclysis
  – High volume positive contrast infused rapidly via tube
  – improves small bowel distension – sensitive for small lesions
  – Time consuming procedure to pass Enteroclysis tube
  – Need to use Fluoro room & CT scanner
  – Unpopular with patients (and radiologists !)
CT
Enteroclysis
CT Enteroclysis

Active Crohn's disease
Imaging for Crohn Disease

Newer Techniques

- CT Enterography
  - High volume (1200ml) negative oral contrast (VoLumen) over 1 hour
  - improves small bowel distension c/w regular CT or SIFT
  - Give IV contrast to evaluate bowel wall
  - Use thin section multislice CT cuts to generate 3D coronal and sagittal views also
  - Well tolerated by patients, no need for jejunal tube
NORMAL SMALL BOWEL
WITH VOLUMEN

View as stack of thin 4 mm images through entire abdomen
NORMAL SMALL BOWEL WITH VOLUMEN

Coronal cuts simulate traditional SIFT view
Imaging for Crohn Disease

Newer Techniques

• CT Enterography
  – Enhanced wall seen better with negative lumen contrast
  – Early studies show superiority to barium studies and conventional CT for detection of mucosal disease activity and strictures.
  – May be problematic in cases of suspected infection or perforation
    • Fluid collections/abscesses may appear similar to bowel
    • May avoid post operatively or when abscess suspected
Crohn’s Disease
Crohn’s Disease

Inflammatory Hyperemia and Reactive adenopathy
Evaluate all abdomen organs as well as bowel
Active vs chronic CD
Active CD

Comb sign
• Crohn’s With Neo-TI & Colonic Disease

• Better evaluation of colon than with SIFT
ILEO-SIGMOID FISTULA
ILEOVESICULAR FISTULA ?
Coronals Show Definite Ileo-vesicular Fistula
• Chronic Crohns in TI
• Fat in bowel wall
CT
Enterography
Post Op. patient with fever

Need to look carefully for extraluminal fluid collections
CT Enterography
Post Op. patient with fever

Abscess seen better after positive oral contrast
Abscess has enhancing wall and is stable on delayed imaging.
Differential diagnosis from TB

• The most important differential diagnosis of Crohn disease is tuberculous.

• The best diagnostic feature for distinguishing between tuberculosis and Crohn disease is the fact that in tuberculous colitis, separation of bowel loops is usually due to adenopathy, whereas in Crohn disease this change is usually caused by fibrofatty proliferation.

• In addition, in tuberculous colitis the nodes are larger and mural stratification is absent.
Thank you...