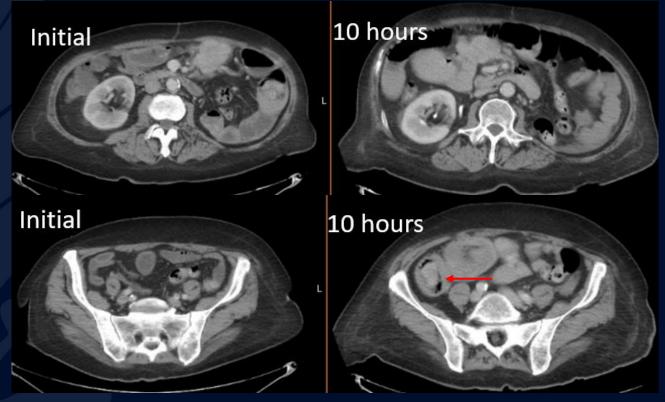
66-year-old male with acute diffuse abdominal pain and unintentional weight loss

Melissa Ulbrick, MS3



CT





RADIOLOGY

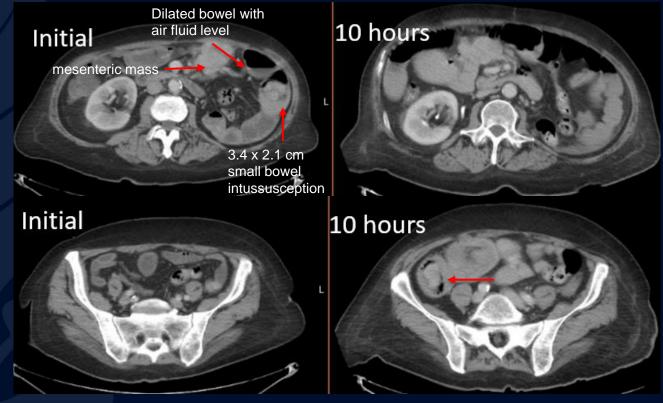




Small Bowel Intussusception



CT



6.5 x 5.2 cm small bowel intussusception



RADIOLOGY

Small Bowel Intussusception

- 90% of small bowel intussusceptions in adults are caused by pathologic lead points
 - Small bowel tumors account for about 5% of all GI tumors
 - Malignant: Adenocarcinoma, Carcinoid, Leiomyosarcoma, Lymphoma, GIST
 - Metastases
 - Most common primary sites are ovary, appendix and colon
 - Other common sites that spread hematogenously include melanoma, breast, and lung
 - Benign: Leiomyoma, Adenoma, Lipoma, Hemangioma
 - Rare: Desmoid, Polyposis Syndromes (Gardner, Peutz-Jeghers)
- This case: renal cell carcinoma
 - Renal Cell Carcinoma accounts for 90% of all renal cancers
 - More common in men than women and often presents after age 60
 - Most common metastatic sites include lung, bone, liver, adrenal gland, and brain
 - Spreads hematogenously



Diagnostic Techniques

- EGD, Colonoscopy, Ultrasound, and Barium swallow
 - First line for nonspecific GI symptoms
- CT Abdomen
 - May be hard to differentiate collapsed bowel versus wall thickening
 - Can detect 70 to 80% of small bowel neoplastic lesions
- CT-enterography or MRI-enterography
 - PO constract helps distend the small bowel to visualize lesions and differentiate etiologies of lesions
- Capsule Endoscopy
 - Good detection for early small bowel masses
- PET-CT
 - Used when CT/MRI are unrevealing or in metastatic disease



Imaging Findings

Malignant Mass	Features
Adenocarcinoma	Duodenum ; usually circumferential but can be polypoid; invasive disease may show fat stranding ; moderate enhancement
Carcinoid	Rare neuroendocrine tumor; appendix and distal ileum; mesenteric mass with small bowel wall thickening; calcifications
Leiomyosarcoma	Ileum and jejunum; ulcerate and bleed ; difficult to differentiate from leiomyoma
Lymphoma	Distal ileum ; risk factors include celiac, Chron's, SLE, history of chemo or extra-intestinal lymphoma; thick-walled mass with dilated bowel; enlarged lymph nodes ; no obstruction
GIST	Stomach; well-defined exophytic mass, often extraluminal; enhancement
Metastasis	Single of multiple polypod intraluminal masses or wall thickening; luminal narrowing ; signs of metastatic disease



Imaging Findings

Benign Mass	Features
Leiomyoma	Rare; jejunum; well demarcated; ulcerate and bleed; hypervascular
Adenoma	Duodenal and ileocecum; p re-cancerous polyps (pedunculated, sessile or mural); enhance
Lipoma	lleocecum; well defined intraluminal mass; non-enhancing
Hemangioma	Jejunum; sessile or pedunculated; arterial enhancement; GI bleeding
Desmoid	Fibrous tissue of the mesentery; benign but locally aggressive; non- enhancing
Hamartoma	Jejunum ; smooth, intraluminal polyp; enhancing; common in Peutz- Jeghers Syndrome



References

- Bianchi M, Sun M, Jeldres C, et al. Distribution of metastatic sites in renal cell carcinoma: a population-based analysis. *Ann Oncol.* 2012;23(4):973-980. doi:10.1093/annonc/mdr362
- Jasti R, Carucci LR. Small Bowel Neoplasms: A Pictorial Review. *Radiographics*. 2020;40(4):1020-1038. doi:10.1148/rg.2020200011
- Laurent F, Raynaud M, Biset JM, Boisserie-Lacroix M, Grelet P, Drouillard J. Diagnosis and categorization of small bowel neoplasms: role of computed tomography. Gastrointest Radiol. 1991 Spring;16(2):115-9.
- Marinis A, Yiallourou A, Samanides L, et al. Intussusception of the bowel in adults: A review. World journal of gastroenterology : WJG. 2009;15(4):407-411. http://lib.cqvip.com/qk/84123X/20094/29478611.html. doi: 10.3748/wjg.15.407.
- Siegel RL, Miller KD, Jemal A. Cancer statistics, 2020. CA Cancer J Clin. 2020;70(1):7-30. doi:10.3322/caac.21590
- Su T, He L, Zhou T, et al. Most adult intussusceptions are caused by tumors: A single-centre analysis. *Cancer management and research*. 2020;12. doi: 10.2147/CMAR.S26892I.

