

Patient selects CT Colonography over conventional colonoscopy

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Patient History

A 65-year-old man with a history of iron deficiency anemia presented for further workup. The patient refused optical colonoscopy and was therefore scheduled for CT Colonography.

Patient Prep and Scanning: Scanner/Workstation specs:

Scanner: GE LightSpeed® Ultra 8-Slice Multidetector CT Scanner

Workstation: GE Advantage Workstation®

Software: GE AdvantageCTC™

CT Colonography

Two days before the procedure, the patient started a low-residue diet. One day before the CT, the patient was restricted to a clear liquid diet. He underwent colonic cleansing with 10-oz. magnesium citrate the afternoon before the examination.

A flexible rectal tube was inserted and the colon was electronically insufflated with carbon dioxide. The scout film was used to help determine adequacy of colonic distention. Supine images of the abdomen and pelvis were obtained using a GE LightSpeed multidetector CT scanner with the following parameters: 120 kV, 50 mA, and 2.5-mm collimation. In the prone position, the patient received intravenous contrast because of possible malignancy and was scanned with the following parameters: 120 kV, 50 mA, and 2.5-mm collimation.

Case Finding

A large 3.7-cm enhancing lesion was identified in the cecum. In the 2-D axial supine image (a), notice the irregularly shaped mildly enhancing mass. While this lesion is in the location of the expected ileocecal valve, the sagittal reformat (b) shows the lesion to be located superior to the IC valve. The virtual dissection view (c), as well as the 3-D endoluminal view (d), clearly confirms the overall size and extent of this lesion. It also confirms the irregular mass-like appearance, concerned to be malignant and the likely cause of the patient's anemia.

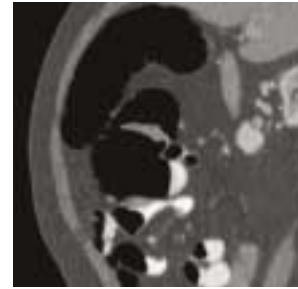


Figure A

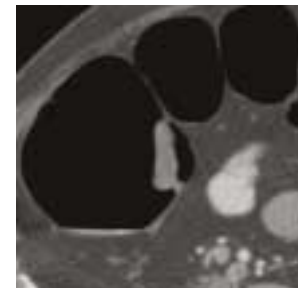


Figure B

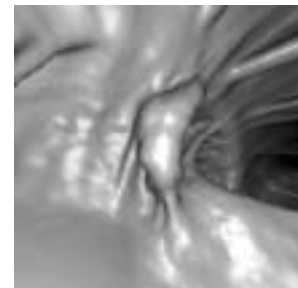


Figure C



Figure D

Figures A-D

Prone colonography dataset shows flat polyp of soft tissue attenuation growing along a haustral fold, opposite the ileocecal valve. Pathology demonstrated tubulovillous adenoma.

The size of the lesion precluded colonoscopic intervention and necessitated that the patient go directly to surgery for biopsy and resection. CT Colonography was successful in bypassing an additional invasive procedure.

Benefit/Conclusion

Studies are now beginning to validate the sensitivity of CT Colonography as a screening method for colon cancer. New imaging displays such as the 360-Dissection view can easily provide a 3-D picture of potential colonic polyps or masses to help improve reader confidence.

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