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Title

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Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 13(1)

ISSN

1936-900X

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Publication Date

2012

DOI

10.5811/westjem.2011.6.6826

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Peer reviewed

Acute Appendicitis from Metastatic Small Cell Lung Cancer

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Supervising Section Editor: Sean Henderson, MD

Submission history: Submitted June 11, 2011; Accepted June 22, 2011

Reprints available through open access at http://escholarship.org/uc/uciem_westjem

DOI: 10.5811/westjem.2011.6.6826

[West J Emerg Med. 2012;13(1):94–95.]

A 62-year-old female presented to the emergency department (ED) with right lower quadrant pain for 3 days. Past medical history was notable for small cell lung cancer (SCLC) with brain metastases. A staging positron emission tomography (PET) performed 10 days prior to presentation showed fludeoxyglucose uptake in the proximal appendix without surrounding inflammation (Figure 1).

In the ED, her physical exam was notable only for right lower quadrant tenderness to palpation, without rebound or guarding. Vital signs were within normal limits. Laboratory results were notable for a white blood count of 22 K/uL with 94% neutrophils (<5% bands). Contrast-enhanced abdominal computed tomography (CT) was performed in the ED showing a dilated appendix with enhancing wall and surrounding fat stranding suggestive of acute appendicitis (Figure 2). She was taken to the operating room emergently for a laproscopic appendectomy, which revealed a perforated appendix. The patient did well and 1 week postoperatively resumed treatment for her SCLC.

Pathology of the appendiceal specimen demonstrated oval cells and nuclear molding consistent with small cell carcinoma involving the muscularis propria.

Malignancies are a rare but known cause of appendiceal obstruction and inflammation, most commonly primary tumors, such as carcinoid or adenocarcinoma. This case of appendicitis from metastatic SCLC is exceedingly more rare, with only 7 prior case reports documented.^{1,2} Interestingly, this patient also had a staging PET CT that detected the metastasis prior to appendiceal obstruction and symptom onset. Other case reports have described screening PET CT incidentally diagnosing acute appendicitis.^{3,4}

While metastases are an uncommon cause of appendiceal obstruction and inflammation, they should be considered as part of the differential diagnosis when a patient with known malignancy presents with symptoms consistent with appendicitis.

ACKNOWLEDGMENTS

The authors would like to thank Gamaliel Rodriguez-Hernandez, MD, and Pamela Deavers, MD, from the Brigham and Women's Hospital Department of Radiology and Brooke Lane, MD, from the Brigham and Women's Hospital Department of Pathology for their assistance in the selection of key images for this publication.

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Conflicts of Interest: By the WestJEM article submission agreement, all authors are required to disclose all affiliations, funding, sources, and financial or management relationships that could be perceived as potential sources of bias. The authors disclosed none.

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Figure 1. Positron emission tomography performed 10 days prior to presentation showing fludeoxyglucose uptake in the proximal appendix without surrounding inflammation consistent with appendiceal metastasis (arrow).

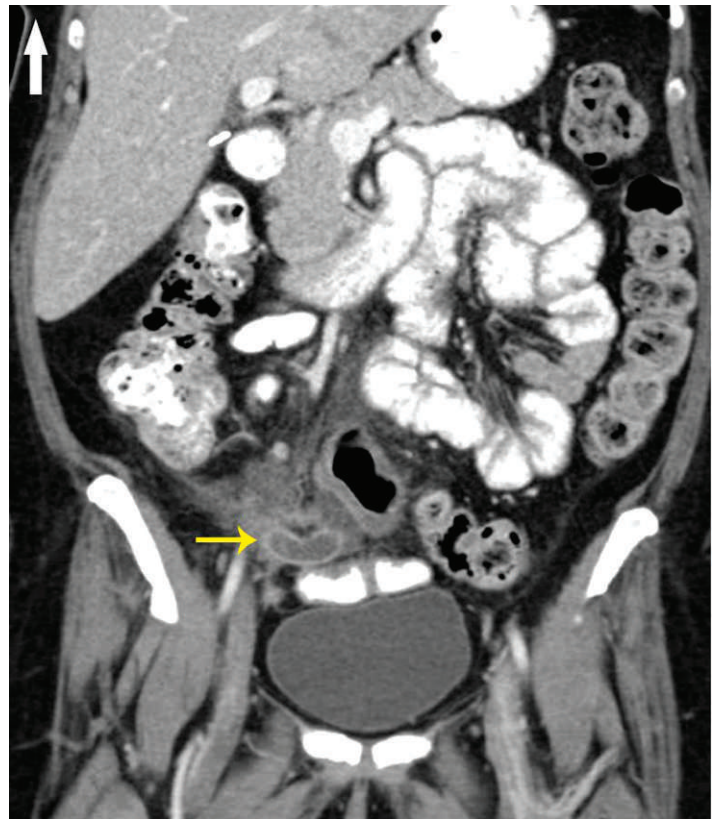


Figure 2. Contrast-enhanced abdominal computed tomography of the abdomen performed in the emergency department showing a dilated appendix with enhancing wall and surrounding fat stranding (arrow) suggestive of acute appendicitis.