

Primary Omental Abscess Without Intra-abdominal Source: Case Report and Systematic Review

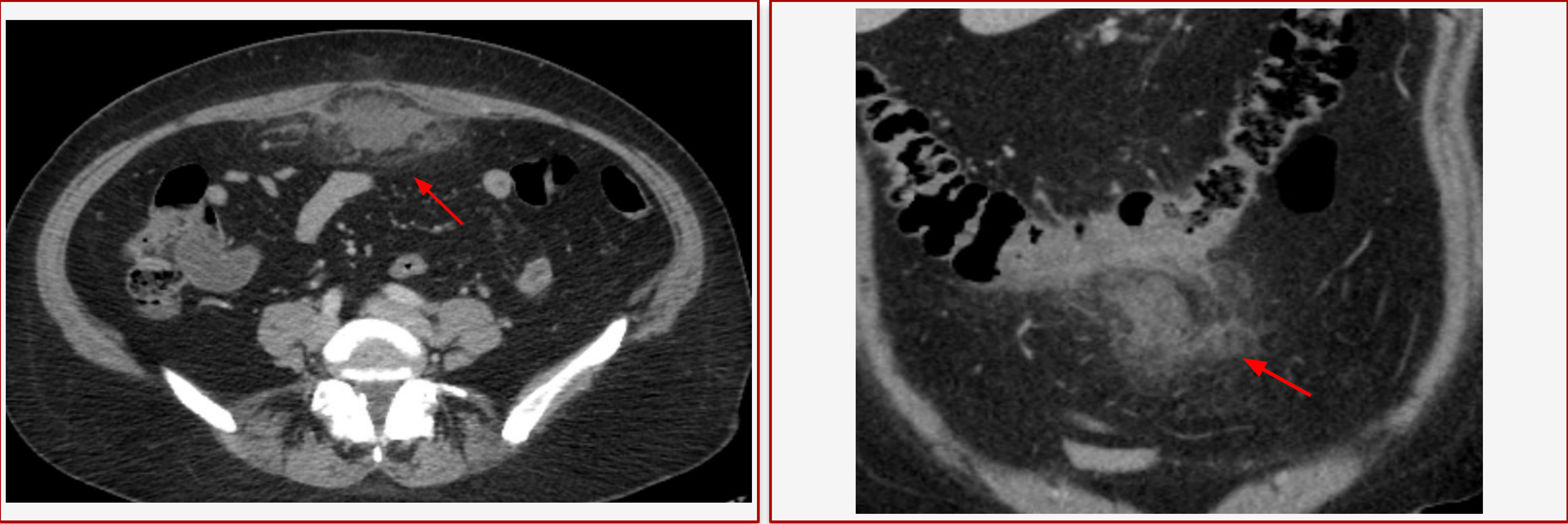
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Case Presentation:

61-year-old female with a history of GERD and obesity and recent streptococcal pharyngitis presented with periumbilical pain and nausea. CT imaging revealed inflammation of the omentum, consistent with possible omental infarction. After initial conservative management, she developed fever, nausea, vomiting and worsening abdominal pain with a leukocytosis of 16. She had no recent history of trauma or surgery. Repeat imaging revealed organized mesenteric stranding anterior to the transverse colon measuring 7x5cm with reactive colonic wall thickening

CT Imaging:



Operation:

A 10 cm central omental abscess adherent to the transverse colon was found, along with a large amount of purulent fluid. No intestinal or colonic perforation was found. A partial omentectomy and drainage were performed. A JP drain was left in the abscess cavity.

Cultures and pathology:

Streptococcus intermedius (anginosus group). Omental tissue with marked acute and chronic inflammation, abscess formation, fat necrosis and fibrosis.

Post-operative Course:

She was treated with antibiotics and underwent a normal colonoscopy and echocardiogram to rule out other sources of infection. She improved clinically, drain was removed, and was discharged on postoperative day six with oral antibiotics.

Methods:

Literature search was completed using MeSH terms. Reports were included if they described clinical presentation, management, and microbiology. Data from these studies were abstracted and collated. Data prior to 2004 was collected using Otagiri study [1].

Results:

Reported Outcomes	Results
Age	Mean 47.7 years (8-84)
Sex	Male 14 (73.7%); Female 5 (26.3%)
Surgical Hx	Prior surgery: 5 (26%); None 9 (47%); Unknown 5 (26%)
Intraoperative microbiology	Polymicrobial enteric/anaerobic flora 2 (10.5%); Streptococcus species 3 (15.8%); Anaerobic organisms 4 (21.1%); Gram-negative organisms 2 (10.5%); Other gram-positive organisms 2 (10.5%); Unknown 6 (31.6%)

Conclusion:

Primary omental abscess is exceedingly rare with only 19 published cases in the literature, 6 in the last 20 years. The etiology of primary omental abscess remains unclear. Secondary omental abscess is more common and may complicate infarction or arise from intra-abdominal or systemic infection. Our case is the first to implicate *Streptococcus intermedius* following streptococcal pharyngitis, suggesting possible hematogenous spread to the omentum. Clinicians should pursue repeat imaging and early operative evaluation when patients with presumed sterile omental infarction deteriorate, as timely recognition, and intervention are critical to favorable outcomes.

References:

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[5] Chen YC, Huang SY, Chou CM. Primary omental abscess in children presenting with acute abdomen. Asian J Surg. 2020 Aug;43(8):868-869.