

CLINICAL IMAGE

Barium-induced pneumatosis intestinalis in a patient with anti-synthetase syndrome

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Abstract

Pneumatosis intestinalis is defined as the presence of gas in the bowel wall. The combination of the two risks, pre-existing connective tissue diseases and barium contrast examination, may trigger pneumatosis intestinalis, albeit at a low incidence. Clinicians should be aware of the condition for proper differential diagnosis.

KEYWORDS

anti-synthetase syndrome, barium, connective tissue disease, pneumatosis intestinalis

1 | INTRODUCTION

A 43-year-old man underwent follow-up chest computed tomography for pre-existing anti-synthetase syndrome-associated interstitial pneumonia, which had been stable with prednisolone, tacrolimus, and azathioprine therapy. He had mild chronic constipation but no comorbidities, including diabetes mellitus. He had no chest and abdominal symptoms. Computed tomography revealed intramucosal gas in the colon and free air around the liver (Figure 1A). The anal side of the colon was filled with high-density contents (Figure 1B). He had undergone an upper gastrointestinal series with barium contrast for his comprehensive medical check-up 3 days prior. Abdominal physical examination and laboratory tests revealed normal findings. He was diagnosed with pneumatosis intestinalis (PI).

The intramucosal gas and free air resolved spontaneously with laxative treatment.

PI is diagnosed based on the presence of intramucosal gas, which can develop as a rare complication of connective tissue diseases.^{1,2} Microangiopathy and steroid treatment have been proposed as its pathogenesis in patients with connective tissue diseases.^{1,2} Also, increased intestinal pressure by intestinal obstruction is assumed to trigger the PI.³ In our case, intestinal obstruction due to impaction of barium contrast medium may have triggered PI in association with mucosal fragility due to anti-synthetase syndrome and steroid treatment. Accumulation of similar cases is needed to clarify the potential links in this rare condition. Clinicians should be aware of PI as a possible adverse event of barium contrast examination in patients with connective tissue diseases.

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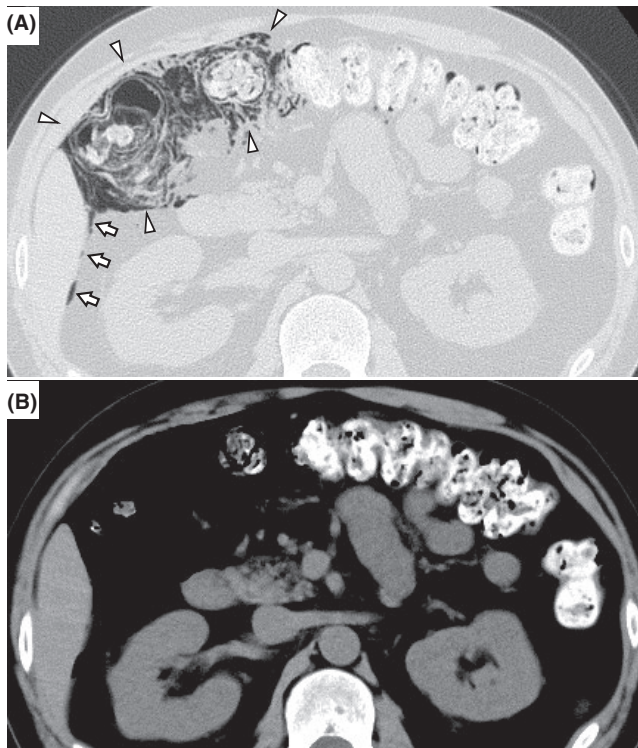


FIGURE 1 Computed tomography images of the upper abdomen. (A) Intramucosal gas in the colon (arrowheads) and free air around the liver (arrows) in a lung window setting. (B) High-density contents, indicating barium contrast medium in a mediastinal window setting.

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Written informed consent for this case report was obtained from the patient.

CONFLICT OF INTEREST

Not declared.

AUTHOR CONTRIBUTIONS

SY and SF gave original idea. SY, TM, SF, and YM wrote the manuscript.

ETHICAL APPROVAL

The publication of present study was in accordance with the ethical standards of our institution.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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