

Sigmoid colon perforation associated with retroperitoneal fluid retention after vascular surgery

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Abstract

A patient with retroperitoneal fluid retention after vascular surgery had a fever of unknown cause. Re-examination suggested fluid infection. Surgery was performed, and the patient was diagnosed with colon perforation. If the fluid volume reduces or the fluid comes into contact with the colon, colon perforation should be suspected.

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Data availability statement: The data that support the findings are available on request from the corresponding author.

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Key clinical message:

Infection due to fluid retention should be considered in patients with retroperitoneal fluid retention after vascular surgery. When retained fluids contact the colon, the fluid may reduce in volume and become filled with air.

Abstract:

A patient with retroperitoneal fluid retention after vascular surgery had a fever of unknown cause. Re-examination suggested fluid infection. Surgery was performed, and the patient was diagnosed with colon perforation. If the fluid volume reduces or the fluid comes into contact with the colon, colon perforation should be suspected.

Key words:

Perforation of the diverticulum in the sigmoid colon, Postoperative infection of artificial blood vessels

A 79-year-old man underwent bypass grafting. From that, retroperitoneal fluid retention was observed around the artificial blood vessel (Figure 1). Despite being asymptomatic, the patient had a fever. Imaging examination revealed no clear cause. Computed tomography (CT) showed the retained retroperitoneal fluid was in contact with the sigmoid colon and had reduced. There was no improvement with antibiotics, the patient was re-examined. CT showed further reduction of the fluid and internal air (Figure 2). The patient was diagnosed with an infection of retained retroperitoneal fluids involving the sigmoid colon, and surgery was performed.

The retained fluids were mixed with pus. In addition to drainage and sigmoid colectomy, artificial blood vessel removal and new bypass grafting were performed. Histopathologically, the diagnosis was inflammation associated with the perforation of a diverticulum in the sigmoid colon.

Because the diverticulum of the colon perforated to retroperitoneal fluid retention around the artificial blood vessel, the cause of infection was not detected by imaging, which made the diagnosis difficult. In such patients¹, if the retained retroperitoneal fluid is in contact with the intestinal tract or if the retained fluids reduced in the case of an unexplained infection, fluid infection due to gastrointestinal perforation should be considered.

Reference:

1. Leroy O, Meybeck A, Sarraz-Bournet B, d'Elia P, Legout L. Vascular graft infections. *Curr Opin Infect Dis* . Apr 2012;25(2):154-8. doi:10.1097/QCO.0b013e3283501853

Figure captions:

Figure.1 CT showed retroperitoneal fluid retention (yellow arrowhead) around the artificial blood vessel (red arrow). CT, computed tomography.

Figure.2 CT showed the air inside the fluid retained in the retroperitoneum (yellow arrowhead). CT, computed tomography.

Ethical statement:

Institutional review board approval was exempted at our institution for this retrospectively designed report and informed consent was obtained from the patient to publish this report.

Author contributions:

AN: wrote the draft of the manuscript and prepared the figures. AN and TI: involved in writing. AN, TI, SI and TA: revised and approved the final manuscript.



