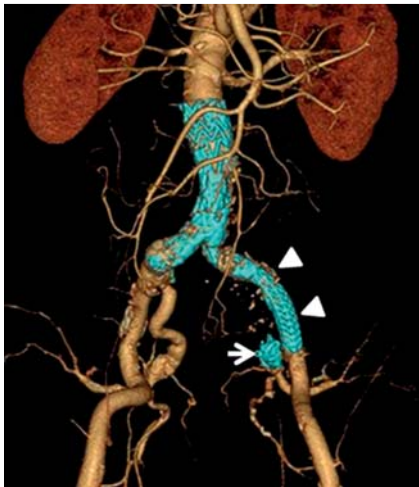


## Fistula from an internal iliac artery aneurysm to the sigmoid colon after endovascular arterial repair



**Fig. 1** Contrast-enhanced computed tomography showed a 5 cm in diameter internal iliac artery aneurysm prior to endovascular arterial repair.



**Fig. 2** Three-dimensional computed tomography angiography after endovascular arterial repair indicated exclusion of the internal iliac artery aneurysm by coil embolization (arrow) and stent grafting (arrowhead).

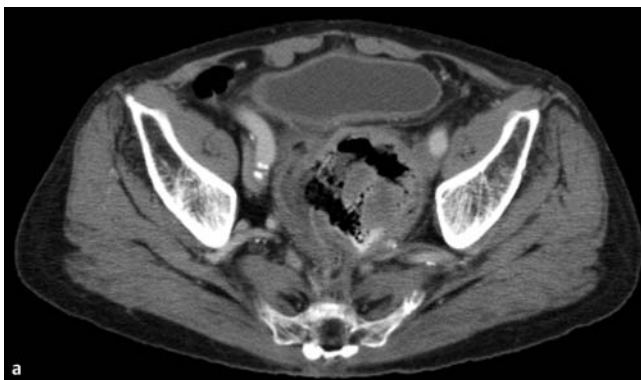
An 82-year-old patient presented with a history of fever for 2 weeks and occasional rectal bleeding. He had undergone endovascular repair of a left internal iliac artery aneurysm (IIAA) 3 years previously (● Fig. 1); distal occlusion of the IIAA with coil embolization and proximal occlusion using an aorto-external iliac artery stent graft achieved successful exclusion of the IIAA (● Fig. 2). Contrast-enhanced computed tomography showed an IIAA (diameter, 6 cm) without obvious enhancement but with massive air in the aneurysm (● Fig. 3). Colonoscopy revealed an ulcer (diameter, 3 cm) with a base covered with feces, approximately 20 cm from the anal verge (● Fig. 4). Gastrografin enema indicated a fistula from the sigmoid colon to the IIAA (● Fig. 5). The patient underwent colostomy, result-

ing in relief of symptoms including fever and rectal bleeding, and rapid decrease in the size of the IIAA, which finally disappeared.

Aneurysms of the internal iliac artery are rare, representing only 1% of all cases of aortoiliac aneurysmal disease [1]. Rupture of an IIAA to adjacent organs, including the extremely rare complication of rupture into the rectosigmoid colon, is associated with high mortality [2,3]; for this reason, prophylactic repair is recommended for IIAAs more than 3 cm in diameter. Traditionally, open surgery was used for IIAA repair; however, open surgery is associated with high morbidity and mortality rates. Recently, endovascular repair of IIAA, including by stent grafting, various embolization techniques, or a combination of both, is being increasingly performed in clinical practice as a novel, less invasive treatment for these aneurysms. However, the long-term complications of endovascular repair of IIAA remain unclear [4,5]. The case reported here represents a rare, unusual complication of an IIAA-colon fistula after endovascular repair. Even if an IIAA is excluded by endovascular repair, if the patient subsequently presents with fever and/or rectal bleedings and – particularly if the aneurysm has not decreased in size since the repair – physicians should be aware that an IIAA-colon fistula may be present.

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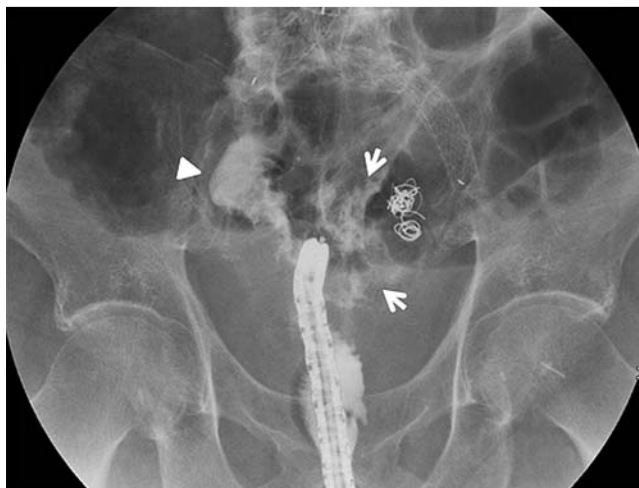
**Competing interests:** None



**Fig. 3** Contrast-enhanced computed tomography indicated the presence of abundant air in the aneurysm, which was close to the sigmoid colon. **a** Axial view, **b** coronal view.



**Fig. 4** Colonoscopy revealed an ulcer with a diameter of 3 cm, the base of which was covered with feces.



**Fig. 5** Gastrografin enema showed a fistula between the aneurysm (arrows) and the sigmoid colon (arrow-head).

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